

# IN MEMORIAM

## Dr. Jos van der Vin

(The Hague 12 January 1945 – Wassenaar 22 November 2011)

On the 22th of November 2012, Dr. Josephus Paulus Antonius van der Vin, member of the Editorial Committee of *BABESCH* (formerly *Bulletin Antieke Beschaving*) since 1983, died unexpectedly, at the age of 66. He was a faithful, critical and excellent colleague who always checked *ad fundum* the last proofs of articles and reviews.

Jos studied classics and archaeology in Leiden and wrote his - voluminous - doctoral dissertation on *Travellers to Greece and Constantinople: Ancient Monuments and Old Traditions in Medieval Travellers' Tales*. Volumes I-II at Leiden University, under the guidance of Prof. Paul P.V. van Moorsel. This monograph was published by the Nederlands Historisch-Archeologisch Instituut at Istanbul in 1980.

Despite his interest in this fascinating world of early Greece travellers, Jos was in the first place a numismatist. He was curator of the ancient coins and engraved gemstones of the *Koninklijk Penningkabinet*, and its associate director, first in The Hague and later in Leiden, when it was housed in the building next to the Rijksmuseum van Oudheden. One of his tasks was to digitalize the collection. When the *Kabinet* moved to Utrecht and merged into the Geld- and Bankmuseum in 2006, Jos retired. His most popular publication on this topic was his textbook on Greek and Roman coins (*Het geld van Grieken en Romeinen. Inleiding in de antieke numismatiek*, Leuven 1984).

During his stay at Netherlands Institute of Advanced Studies (1985-1986), he concentrated his research on two topics: to document, as completely as possible, Roman coin hoards and stray finds in The Netherlands, and to study modern numismatic literature in order to learn how colleagues in England and Germany deal with coins in a modern scientific way.

At Leiden University Jos was teacher of ancient numismatics from 1976 until 2006, first in the Faculty of Arts, then after 1997 in the then established Faculty of Archaeology. Though his teaching, during one hour a week, was not compulsory, many students of arts, classical languages, ancient history and archaeology filled his classroom year after year. He also gave courses and introductory classes for students from other institutions and colleagues from other universities could always ask him to receive these students. His teaching was not only clear and to the point, but also practical. In his *Kabinet* office he showed coins from the collection which the students found very stimulating. They had to measure, weigh, and date them, and interpret their images. Every year he offered a different topic in his course so that many students followed more than one. And most unusually, his examinations were oral and personal. He took his time for every individual. He also organized student excursions to Trier and Istanbul.

For decades, Jos van der Vin was the best coin expert in the Netherlands, consulted by countless archaeologists, especially those working in Roman provincial archaeology, but he also identified lots of coins from Dutch excavations in the Mediterranean, e.g. those from Joost Crouwel's excavations at Geraki. He participated in Maarten Raven's excavations in Egypt. He always offered quick, punctual and precise assistance. His knowledge was encyclopaedic.

He published nine books, and many articles, and organized an exhibition *The Euro in Antiquity: New Money under Emperor Augustus* (1996-1997) at Leiden. He became guest-curator of the Rijksmuseum van Oudheden at Leiden in 2009. He described its collection of ancient coins. His publications often addressed the archaeologists and amateurs in The Netherlands, but Van der Vin was also an international authority on late antique coins and contorniates and was a highly esteemed contributor to the *Fundmünzen* series. He gave many lectures for the Dutch Classical Union, *Ex Oriente Lux* and numismatic societies.

Jos was also active in his residence, Wassenaar. Together with other members of his Catholic home

parish he edited a book *Gelukkig in Gods naam* (Lucky in God's name) in 1990, dedicated to Saint Willibrord and the eight centuries long history of the St. -Willibrordus parish at Wassenaar.

We will miss Jos, who was no flamboyant, but rather a modest friend, and we will never forget him. His work for *BABESCH* has been indispensable.

L. Bouke van der Meer and Eric M. Moormann

#### BIBLIOGRAPHY OF JOS VAN DER VIN

- Review of K. Kübler, Kerameikos. Ergebnisse der Ausgrabungen, 6. Die Nekropole des späten 8. bis frühen 6. Jahrhunderts, 2, *BABesch* 46 (1971) 218-219.
- Einige Bemerkungen zu den Kapitellen von Kairouan, *RAC* 49 (1973) 361-374 (with P. van Moorsel).
- Een bewerkte dupondius van Nero uit Maurik, *Jaarboek voor munt- en penningkunde* 60-61 (1973-1974) 172.
- Sacerdos sancti dei Solis Elagabali, *Hermeneus* 46 (1974-1975) 129-137.
- Review of C. Preda, Histria, 3. Descoperirile monetare 1914-1970, *BABesch* 50 (1975) 304-305.
- Aurora oder Zephyr?, in *Festo en opgedragen aan A.N. Zadoks-Josephus Jitta bij haar zeventigste verjaardag*, Groningen 1976, 601-609.
- A hoard of late Roman coins from Heerlen, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 26 (1976) 169-174 (with J.T.J. Jamar).
- Travellers to Greece and Constantinople: Ancient Monuments and Old Traditions in Medieval Travellers' Tales*, 2 vols, Leiden 1980.
- The return of Roman ensigns from Parthia, *BABesch* 56 (1981) 117-139.
- Een munt uit Bilbilis in Tiel, *De beeldenaar* 5 (1981) 176-180.
- Horses from Syracuse, *BABesch* 57 (1982) 200-207.
- Inleiding antieke numismatiek*, The Hague 1982.
- Romeinse en vroeg-middeleeuwse munten uit een stadskernopgraving in Maastricht, *De beeldenaar* 7 (1983) 121-125 (with T.A.S.M. Panhuysen).
- Obbicht: Romeinse munten op en om een villaterrein, *Jaarboek voor munt- en penningkunde* 71 (1984) 5-25.
- Muntvondsten in Nederland*, The Hague 1984 (with H.W. Jacobi).
- Het geld van Grieken en Romeinen: inleiding in de antieke numismatiek*, Louvain 1984.
- Koper met zilverglaans: een 3e-eeuwse muntschat uit romeins Frankrijk*, Surhuisterveen 1984.
- Munten uit Arentsburg, *Westerheem* 35 (1986) 219-224.
- Schatvondst Haps 1986, *Jaarboek voor munt- en penningkunde* 74 (1987) 159-162.
- Drachmen op drift, *De beeldenaar* 12 (1988) 279-281.
- Late fourth-century gold hoards in the Netherlands, *Rivista italiana di numismatica e scienze affini* 90 (1988) 263-279.
- Een laat-Romeins (munt)gewicht uit Wijk bij Duurstede. Een bijproduct van de keizerlijke munt, *De beeldenaar* 14 (1990) 123-129.
- Review I. Touratsoglou, Die Münzstätte von Thessaloniki in der römischen Kaiserzeit, *BABesch* 66 (1991) 200.
- L'inaugurazione di Constantinopoli: 11 maggio 330 d.C., *Glaux* 7 (1991) 591-603.
- Vondsten op het Kops Plateau te Nijmegen, *De beeldenaar* 15 (1991) 317-322.
- Die Fundmünzen der römischen Zeit in den Niederlanden I: Provinz Friesland*, Berlin 1992 (with M.R. Alföldi).
- 'Victoria Aaaugggg'. Een solidus uit St.-Odiliënberg, *De beeldenaar* 16 (1992) 75-78.
- 'Victoria AAAUGGGG ? : een solidus uit St.-Odiliënberg, *Roerstreek* 25 (1993) 47-50.
- Schatvondst Huigsloot - Haarlemmermeer - 1902 en 1992, *De beeldenaar* 17 (1993) 392-396.
- Two new Roman hoards: Zoutkamp and Ried, *BABesch* 68 (1993) 247-253.
- De schatvondst van 1991 in Zoutkamp, *Bulletin Vereniging van Vrienden van het Groninger Museum* 43 (1995), 2-6.
- Die Fundmünzen der römischen Zeit in den Niederlanden II: Provinzen Groningen, Drenthe, Overijssel, Flevoland*, Berlin 1996 (with M.R. Alföldi).
- De euro van de oudheid: nieuw geld onder keizer Augustus*, Leiden 1996.
- Roman coins in the Dutch Province of Friesland, in C.E. King and D.G. Wigg (eds), *Coin Finds and Coin Use in the Roman World: the thirteenth Oxford Symposium on Coinage and Monetary History: 25-27 March 1993*, Berlin 1996, 357-371.
- Romeinse munten in Noord-Nederland, *Nieuwe Drentse Volksalmanak* 113 (1996) 60(148)-73(161).
- Schatvondst Uzita, 1972, *Jaarboek voor Munt- en Penningkunde* 83 (1996) 21-50.
- A coin hoard from Geraki in Lakonia, *Pharos* 6 (1998) 71-91.
- Archeologische vondsten in Herxen, *Rondom de toren* 49 (1998) 20-21.
- Review of F. van Keuren, The coinage of Heraclea Lucaniae, *BABesch* 73 (1998) 205-206.
- Munten van Romeinse grensforten in Nederland, *Jaarboek voor Munt- en Penningkunde* 83 (1996 [published 1999]) 51-67 (with N.A. Rabouw).
- Roman coins from Wijnaldum, in J.C. Besteman (ed.), *The excavations at Wijnaldum. Reports on Frisia in Roman and Medieval times*, Rotterdam 1, 1999, 185-189.
- Geraki: an acropolis site in Lakonia: preliminary report on the fifth season (1999), *Pharos* 7 (1999) 21-49 (with J.H. Crouwel and M. Prent).
- Een Romeins medaillon uit Wesepe, gem. Olst, *Overijsselse historische bijdragen* 115 (2000) 158-160.
- Geraki: an acropolis site in Lakonia: preliminary report on the sixth season (2000), *Pharos* 8 (2000) 41-76 (with J.H. Crouwel).

Münzen des augusteisch/julisch-claudischen Legionscastellum in Nijmegen (Nimwegen) am Kops Plateau, in R. Wiegers (ed.), *Die Fundmünzen von Kalkriese und die frühkaiserzeitliche Münzprägung: Akten des wissenschaftlichen Symposiums in Kalkriese, 15.-16. April 1999*, Möhnesee 2000, 139-151.

Roman coins in the Northern Netherlands, in B. Kluge and B. Weisser (eds), *XII. Internationaler Numismatischer Kongress Berlin*, Berlin 2000, I, 635-638.

Coins in Athens at the time of Peisistratos, in *Peisistratos and the tyranny. A reappraisal of the evidence*, Amsterdam 2000, 147-153.

Het ontstaan van De Beeldenaar, *De beeldenaar* 25 (2001) 243-246.

Monetarisierung und Handel am Niederrhein in der augusteischen Zeit, in Th. Grünwald and H.-J. Schalles (eds), *Germania inferior: Besiedlung, Gesellschaft und Wirtschaft an der Grenze der römisch-germanischen Welt*, Berlin 2001, 397-408.

Coin use in and around military camps on the Lower-Rhine: Nijmegen-Kops Plateau, in *The transformation of economic life under the Roman empire. Proceedings of the Second Workshop of the International Network "Impact of empire. Roman empire, c. 200 B.C. - A.D. 476"*. Nottingham, July 4 - 7, 2001, Amsterdam 2002, 160-171.

Geraki: an acropolis site in Lakonia: preliminary report on the seventh season (2001), *Pharos* 9 (2001) 1-32 (with J.H. Crouwel).

*Die Fundmünzen der römischen Zeit in den Niederlanden* III,1: Nijmegen - Kops Plateau, Mainz am Rhein 2002 (with M.R. Alföldi).

Coins and continuity in the Dutch river area at the end of the third century AD, *European Journal of Archaeology* 6 (2003) 55-87 (with A. Kropff).

Geraki: an acropolis site in Lakonia: preliminary report on the ninth season (2003), *Pharos* 11 (2003) 1-34 (with J.H. Crouwel).

Denarii uit Posen, *De beeldenaar* 28 (2004) 238-240.

Geraki: an acropolis site in Lakonia: preliminary report on the tenth season (2004), *Pharos* 12 (2004) 1-30 (with J.H. Crouwel).

Kontorniat, in *Reallexikon für Antike und Christentum* XXI, Stuttgart 2005, 498-509.

Geraki: an acropolis site in Lakonia: preliminary report on the eleventh season (2005), *Pharos* 13 (2005) 3-28 (with J.H. Crouwel).

Het geld van Constantijn, *Hermeneus* 79 (2007) 89-94.

Review of N. Asutay-Effenberger, *Die Porphyrsarkophage der oströmischen Kaiser. Versuch einer Bestandserfassung, Zeitbestimmung und Zuordnung*, *BABESCH* 84 (2009) 246-247.

# Social Network Analysis and the Emergence of Central Places

## *A Case Study from Central Italy (Latium Vetus)*

Francesca Fulminante

### Abstract

*The last decade has witnessed a growing interest in the network model, both as a metaphor and as an analytical tool, within a wide range of disciplines, and recently archaeology. This article aims to assess the potential of the social network analysis model for the study of emergent complex polities, using a case study from central Italy (Latium vetus). In particular the emergence of known proto-urban and urban centres in this area, from the Final Bronze Age (1175/1150-950/925 BC ca), during the Early Iron Age (950/925-750 BC ca) up to the Orientalizing Age (750-580 BC ca) and Archaic Age (580-509 BC ca), will be examined by using social network analysis (SNA) centrality indexes and tools. Thus, the potential of this approach will be assessed, and its associated theoretical and methodological issues discussed.\**

### INTRODUCTION

During the last few decades a number of traditional disciplines among the humanities, such as history, art history, ancient history, archaeology and historical archaeology have witnessed a significant growth of interest in social network analysis, which had previously principally confined to the fields of anthropology, sociology and social geography. In particular, within archaeology various applications have shown that social network analysis can provide a useful set of theoretical and technical tools to answer a variety of spatial as well as social questions and more importantly a combination of the two. While a number of case studies with practical examples have concerned pre-historical or fully historical societies, the potential of social network analysis for the study of the emergence of complex polities has only been used as a metaphor for interpretation rather than an analytical tool.

This article aims to fill this gap by applying a number of social network centrality indexes to predict proto-urban and urban settlements formation in *Latium Vetus* (fig.1) from the Final Bronze Age (1175/1150-950/925 BC ca) up to the Archaic Age (580-509 BC ca.).<sup>1</sup> This will be done by comparing the grades of centrality generated by social network analysis indexes, with their centrality ranks, based on existing, recognised, historical and archaeological knowledge; thus it will be possible to evaluate these indexes and

their capacity of predicting the emergence of central places.

Traditional locational analyses, which have proved successful in investigating settlement hierarchy and centralization, such as the central-place theory and the rank-size rule, present a limit which is the adoption of a basically static view. In the majority of those analyses the importance of a site has only been measured in relation to a local distribution: the size of the settlement itself and the distance from the immediate neighbouring settlements. In this way only first order relationships (neighbours) are considered, while higher orders are disregarded. Seeing the distribution not as a set of points on a plane, but rather a set of points, which are related and connected, leads to the idea of the network.<sup>2</sup>

In this study, Latial settlements from the Final Bronze Age (1175/1150-950/925 BC ca) to the Archaic Age (580-509 BC ca) will be connected via rivers and road<sup>3</sup> networks, as a means of social communication and a number of centrality indexes, commonly used in social network analysis, will be calculated. The results of the analysis will then be collated, and also compared against what is independently known from the historical reconstruction, based on archaeological and historical sources. In this way the potential and also the theoretical and practical issues of social network analysis for the study of the emergence of complex polities will be assessed and discussed. Finally some suggestions will be advanced for



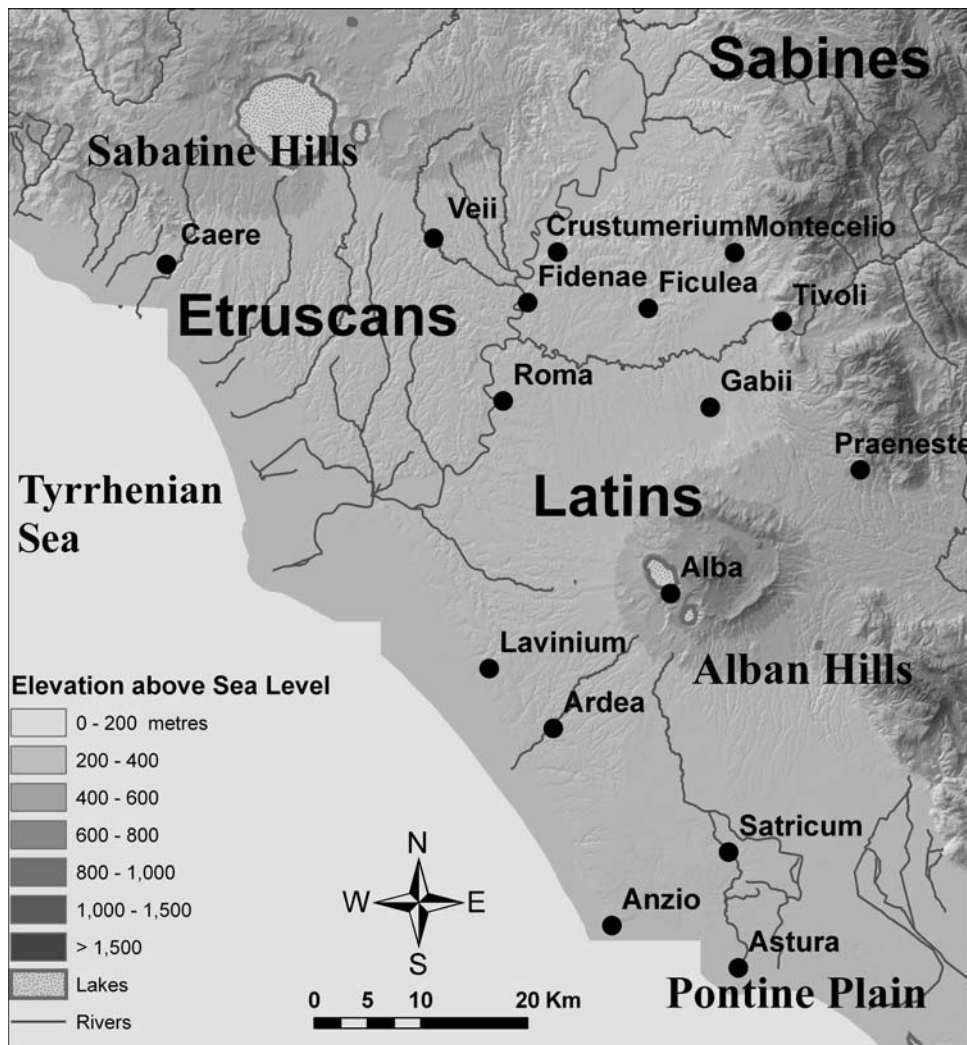


Fig. 1.  
Geographical  
context: Latium  
Vetus with major  
Early Iron Age  
settlements.

further developments of this project and for the more general application of social network analysis in archaeology.

#### THE SOCIAL NETWORK ANALYSIS 'PARADIGM' AND ARCHAEOLOGY

It is commonly agreed that the last three decades have seen an exponential growth of interest in social network analysis from within a wide variety of academic fields as well as in the public sphere. A number of books<sup>4</sup> have popularised and diffused many of the social network analysis principles such as, for example, the small world idea,<sup>5</sup> first elaborated by social psychologist Stanley Milgrom, according to which strangers can be connected via a short chain of acquaintances.<sup>6</sup>

At the same time, as noticed by Knoke and Yang,<sup>7</sup> a similar proliferation of network research

applications to natural phenomena as well as to complex social systems occurred in mathematical and physical disciplines.<sup>8</sup> But an even greater contributory factor to the diffusion of this model has been the proliferation of a number of software-tools<sup>9</sup> and manuals<sup>10</sup> that are intelligible to non-specialists, who lack a background in mathematics and physics.

As a consequence of this diffusion, social network analysis can now be rightly considered as an institutionalized transdisciplinary and interdisciplinary perspective or paradigm.<sup>11</sup> In fact its basic concepts and indexes<sup>12</sup> are widely used in a variety of diverse disciplines, ranging from sociology and anthropology,<sup>13</sup> classic areas for social network analysis studies, to ethnology,<sup>14</sup> economics, business management and organization studies,<sup>15</sup> geography,<sup>16</sup> economic geography,<sup>17</sup> biology,<sup>18</sup> medicine, etc.<sup>19</sup>

More recently the model/technique of social network analysis has been introduced into more traditionally humanistic disciplines, such as classics,<sup>20</sup> ancient history,<sup>21</sup> history,<sup>22</sup> art history,<sup>23</sup> cultural history,<sup>24</sup> archaeology (see below) and historical archaeology.<sup>25</sup> This widespread diffusion of social network analysis among so many varied and different disciplines is an interesting research topic in itself.<sup>26</sup>

The underlying principle of social network analysis is 'structural relations'. According to this perspective actors' behaviour is not only based on their attributes (sex, age, mentality, belief etc.) but is interdependent on and influenced by the behaviour of other actors.<sup>27</sup> The first pioneering study in this direction was Jacob Moreno's sociometric work,<sup>28</sup> which elaborated a *sociogram* or a two-dimensional diagram for representing 'the relations among actors in a bounded social system, for example, an elementary classroom'.<sup>29</sup>

This study, which introduced concepts and theories from graph theory<sup>30</sup> to social studies, is universally considered the starting point of social network analysis.<sup>31</sup> In sociograms and graphs, actors are represented by a set of points (the nodes or vertices), while lines drawn between pairs of points indicate a relation or tie between two actors that can be directed (arcs, generally represented by arrows) or undirected/bidirectional (edges, normally represented by simple lines), and un-valued or valued, depending on various degrees of intensity.

Actors can be individuals and links among them might represent friendship, animosity, family relationships etc.; but actors can also be microscopic entities such as neurons or macroscopic entities such as communities, cities or even nation states and their relationships can be measured in terms of neuronal connections (in the first case), alliances, trade etc. (in the others). The scope of social network analysis is to represent actors and their relations and to measure them accurately in order to explain why they occurred and what the consequences are.<sup>32</sup>

While social network analysis is a relatively new method and tool in archaeological research, a couple of articles have already appeared which discuss general concepts and methods in relation to the discipline and review a number of studies. In particular, Gary Lock and John Pouncett, in their introduction to a session on social network analysis in archaeology, organised at the 2006 conference on *Computer and Quantitative Methods in Archaeology*, provided a concise but effective overview.<sup>33</sup>

These scholars correctly identified the roots of archaeological social network analysis in quantitative geography<sup>34</sup> and described the fragmented interest in this technique since the early 1990s up to the end of the last Millennium. At the turn of the 3<sup>rd</sup> Millennium, as emphasised by the same authors and by Ulrich Müller, the use of social network analysis in archaeology seems to have grown exponentially.<sup>35</sup>

A number of pioneering applications, developed during the 1970s and 1980s, and generally overlooked by recent literature, have used social network analysis to study rivers and road networks and predict the emergence of central places such as 12<sup>th</sup> and 13<sup>th</sup> centuries Moscow<sup>36</sup> or Roman London;<sup>37</sup> or discussed the utility of graph theory in the interpretation of regional survey data<sup>38</sup> and of social network analysis in the study of prehistoric trade.<sup>39</sup>

More recently social network analysis, as an analytical tool, has been used to study communications, transport and trade, social and economic structures within fully historical communities;<sup>40</sup> or to investigate socio-political and economic relationships or belief systems within pre-historical communities,<sup>41</sup> where fixed ordered hierarchies were not yet fully established.

The potential of social network analysis in the study of the emergence of complex polities, ancient states and empires has also been emphasised<sup>42</sup> but rarely investigated,<sup>43</sup> and, recently published studies,<sup>44</sup> mainly adopted the concept as an interpretative metaphor<sup>45</sup> rather than a tool for analysis, or used social network analysis concepts to build agent-based simulation models.<sup>46</sup> Finally what is generally lacking is a discussion of issues and problems either in the application of the model or on a more general theoretical level.<sup>47</sup>

This article aims to present a concrete application of the social network principles as an analytical tool; the method will be tested on a specific historical and geographical context and the results will be assessed by comparing them with independent historical knowledge and will hopefully provide the ground for further discussion and studies.

#### SOCIAL NETWORK ANALYSIS AND PROTO-URBAN/ URBAN CENTRES IN CENTRAL ITALY: METHODOLOGY

A long tradition of studies has accumulated a great deal of information and knowledge on the emergence of complex polities and urbanization processes in middle Tyrrhenian Italy during the Final Bronze Age and the Early Iron Age. Al-

though finer details and local variations continue to be discussed and debated, the main picture is commonly agreed both from historical perspectives, based on ancient authors,<sup>48</sup> and from an archaeological point of view.<sup>49</sup>

The Roman school of pre and proto-historic studies,<sup>50</sup> founded in Rome by Renato Peroni, who sadly has recently died, made great strides in this field; and while the roots of the process are still being discussed, and a long-standing debate has been engaged in the identification and weight of internal impulses versus external *stimuli*, it is generally agreed that by the end of the Final Bronze Age (1050/950-950/925 ca) and during the Early Iron Age (900-750 BC ca), a number of centralized settlements, the so-called proto-urban centres, appeared in middle Tyrrhenian Italy,<sup>51</sup> with slightly different modalities and timing.<sup>52</sup>

While recent research has shown a greater internal variability and a more nuanced picture than previously thought,<sup>53</sup> it is generally agreed that the process of centralization and nucleation was more rapid, revolutionary and earlier in southern Etruria, and it was more gradual and slightly later in *Latium Vetus*. In particular, in the course of the Final Bronze Age, in southern Etruria, it is possible to identify the sudden abandonment of a large number of hilltops and open Bronze Age sites in coincidence with the (novel) widespread occupation of a few larger plateaux (such as Veii, Tarquinia, Caere and Vulci), which previously had not been settled or at least not so extensively.<sup>54</sup> In *Latium Vetus* the process of agglomeration can be generally seen as more gradual and often the first order settlements developed from already occupied small hilltops or *arces* (generally defined *acropoleis*, with Greek term), which were enlarged, by including the connected plateaux within the inhabited area.<sup>55</sup>

Common features have also been identified for these nucleated centres such as: 1. proximity to the sea or rivers, which allow regional and long-distance connections; 2. availability of good arable land; 3. defensibility; and 4. size which differentiates these settlements from the minor settlements within the same region.<sup>56</sup> With reference to this last point a marked difference has again been observed between southern Etruria and *Latium Vetus*: in the former region primary order centres are normally noticeably large, ranging from 150 to 200 ha, while in the latter primary order centres measure normally between 20-30 and 80-90 ha with the sole exception of Rome (100-200 ha ca), which was more comparable to Etruscan centres.<sup>57</sup>

Building on this earlier knowledge, this study

considers Early Iron Age Latial sites larger than 20-25 ha as primary centres or 'central places'. This classification is based both on the observation of settlements size frequencies (*fig. 2* shows as an example the graph for the Early Iron Age 2, about 850/825-750 BC), and previous studies. For example the work by Marco Pacciarelli on proto-urban developments in middle Tyrrhenian Italy has identified three main orders of magnitude for primary proto-urban centres in *Latium Vetus*.<sup>58</sup>

Pacciarelli distinguished Latial centres A, between 100 and 200 ha (only Rome falls within this category); centres B, between 50 and 100 (for example *Gabii*), and centres C between 20 and 50 ha (the most common range for primary centres in *Latium Vetus*), while centres D between 1 and 15 ha are considered subordinates to all other centres.<sup>59</sup> In addition my previous work has confirmed these definitions by the application of a number of different locational models.<sup>60</sup>

When considering the Final Bronze Age, Latial centres larger than 4-6 ha, have also been considered to have had some sort of central role. This size limit has been chosen on the basis of Final Bronze Age settlements size frequencies (*fig. 3* shows as an example the graph of the Final Bronze Age 3, about 1050/950-950/925 BC), and on a number of studies conducted on southern Etruria, which have chosen a similar size threshold to distinguish between first order and secondary order villages.<sup>61</sup>

Primary Bronze Age and Early Iron Age centres, identified on the basis of their size and contextual archaeological knowledge will provide a checklist to compare centres predicted to be central by social network analysis indexes. In particular a number of different types of networks will be modelled on the basis of 1. proximity analysis, 2. rivers and 3. road connections. Then a number of centrality indexes, commonly used in social network analysis (Degree Centrality, Betweenness Centrality and Closeness Centrality) will be calculated for each type of network. Finally the results from these analyses will also be compared among themselves and against the above mentioned checklists.

As already mentioned, a number of software-tools are available for social network analysis. For this study the Pajek software has been used because it is available as a free source and is provided with an excellent and accessible manual.<sup>62</sup> Wouter de Nooy, one of the developers of this software and the authors of the book, has provided precious advice from a very early stage of the project and has developed a script used with

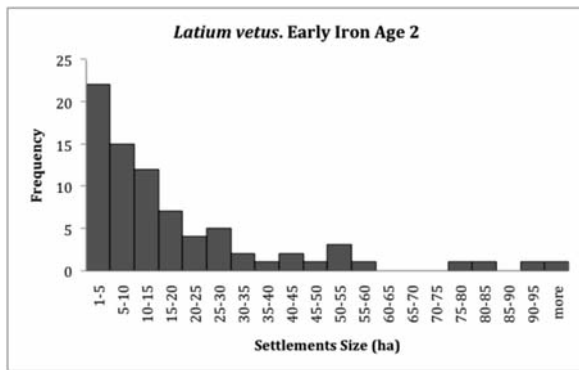


Fig. 2. Size frequencies of Early Iron Age 2 Latial settlements.

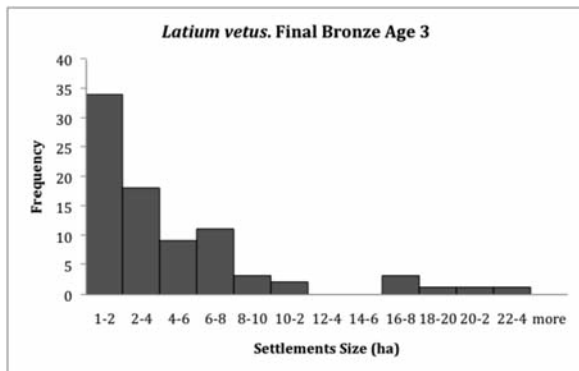


Fig. 3. Size frequencies of Final Bronze Age 3 Latial settlements.

the statistical software R to model the ideal network based on proximity analysis, performed with the Delaunay triangulation, as shown below.

The river and road networks have been modelled by connecting two sites directly and reciprocally reachable via a river or a road. The river network has been based on digital data provided by Regione Lazio, while the road network has been modelled on routes reconstructed by Marcello Guaitoli for the Final Bronze Age<sup>63</sup> and Lorenzo Quilici and Stefania Quilici Gigli for the Early Iron Age.<sup>64</sup> Both will be defined and discussed in more detail in the section which illustrates and discuss the analyses.

The present study has been limited to Latial settlements from the Final Bronze Age to the Archaic Age, due to it representing a coherent group with common material culture and roughly defined geographical limits. Previous phases have been omitted because the Grotta Nuova and Apennine culture would have implied a larger geographical delimitation. Settlement data collected

during previous research has been checked against the recent publication of all pre- and proto-historic sites of Lazio edited by Clarissa Belardelli and other authors.<sup>65</sup> A number of sites only known from literary sources such as *Pedum-Gallicano* or *Bola-Labici* have also been included (for a complete list of sites included in this study see Appendix 1).

When considering the representativeness and completeness of the data sample, issues of an imbalanced intensity of research within the region cannot be denied. In addition it has been observed that missing data in social network analysis might affect smaller networks.<sup>66</sup> However, as will be shown in the subsequent sections, positive results from the analyses, partially validated by statistical tests, seem to imply that the sample has a good representativeness and that even the missing data does not significantly affect the model.

When full coverage surveys of settlements size measurements were lacking, their estimations have been based on specific theoretical assumptions, formulated by the Roman school of pre- and proto-history and generally accepted by scholars studying settlement patterns in Bronze Age and Early Iron Age central Italy. These assumptions have been illustrated and discussed in a contribution by Alessandro Vanzetti, according to whom:

1. in the case of a well defined morphological unit such as a hilltop or a small plateau, the unity of the settlement is implied, even though the material is scarce (particularly in the Bronze Age);
2. when Bronze Age material (even scarce material) is found along the ridges and slopes of well defined morphological units such as hilltops or small plateaux, it is assumed that they have been displaced from the top (due to post-depositional processes such soil erosion and/or alluvial deposits) and a unitarian settlement is implied.<sup>67</sup>

In addition, when considering Early Iron Age settlements and, in particular, large proto-urban settlements located on the plateaux later occupied by Archaic cities, the localization of formal burial areas has provided additional topographical elements, which have helped to establish the hypothetical extent of the inhabited area. In fact, it is generally agreed that by the end of the Final Bronze Age and the beginning of the Early Iron Age, a formal distinction between the living and the dead was sanctioned, and funerary areas were confined to the outside of the inhabited area, and normally formed a sort of annular ring around



it.<sup>68</sup> However, the plurality of these funerary areas has been differently interpreted, against or in favour of the assumption of the unity of the settlement.<sup>69</sup>

#### SOCIAL NETWORK ANALYSIS CENTRALITY INDEXES

As mentioned earlier a number of centrality indexes, commonly used in social network analysis, such as Degree Centrality, Betweenness Centrality and Closeness Centrality have been calculated for different types of networks modelled for Final Bronze Age and Early Iron Age Latial centres on the basis of 1. proximity analysis, 2. rivers and 3. road connections. This procedure is based on the assumption that natural or human geographical connections such as rivers or roads equate to encounters and exchanges not only of goods and objects but also of ideas and information.

The *Degree Centrality* 'measures the extent to which a node connects to all other nodes in a social network'<sup>70</sup> and indicates how easily information can reach a node. It is based on the assumption that the more links and neighbours a node has, the higher the probability for that node to receive information, and is given by the following equation:

$$C_D(N_i) = \sum_{j=1}^g x_{ij} (i \neq j)$$

This means that, in a simple and undirected network with  $g$  actors (where  $g$  is the total number of nodes or actors), the Degree Centrality ( $C_D$ ) of an actor or node  $i$  ( $N_i$ ) is given by the sum of the number of its direct links to the  $g-1$  other  $j$  nodes of the network ( $\sum_{j=1}^g x_{ij}$ ), that is, in simple terms, the number of its neighbours.<sup>71</sup>

However, actor degree centrality may vary with the size of the network ( $g$  or the number of nodes/actors). In fact the larger the network, or the number of its nodes/actors, the higher the potential of each single actor/node to be directly linked to other actors. For example, an absolute actor degree centrality of 3 (which means direct link to three other actors), might represent a very high value in a network of 5 actors but would be a low value in a network of 50 actors or more. Therefore, Wasserman and Faust, in order to eliminate the effect of variation in degree centrality caused by the size of the network ( $g$ ), suggest normalizing it according the following formula:<sup>72</sup>

$$C'_D(N_i) = \frac{C_D(N_i)}{g-1}$$

Then the normalized degree centrality ( $C'_D$ ) of a node  $i$  ( $N_i$ ), is given by its Degree Centrality,  $C_D(N_i)$  divided by the maximum number of possible connections with the other actors, that is the total number of nodes ( $g$ ) minus one, the node itself ( $g-1$ ). In this way it is possible to yield 'the proportion of the network members with direct ties to actor  $i$ . Proportions vary between 0.0, indicating no connections with any actors (i.e. an isolate), and 1.0, reflecting direct ties to every one. Normalized actor degree centrality measures the extent to which an actor is involved in numerous relationships. Actors with high scores are the most visible participants in a network.'<sup>73</sup>

The *Betweenness Centrality* indicates the degree to which an actor controls or mediates 'the relations between other pairs or dyads of actors that are not directly connected. Actor betweenness centrality measures the extent to which other actors lie on the geodesic path, or the (shortest distance), between pairs of actors in the network.'<sup>74</sup> At this point it ought to be noted that distance in a network is the number of links which connects two nodes, not a geographical distance. In other words the betweenness centrality index measures the extent to which a node or actor lies on the shortest route connecting each pair of other nodes/actors in the network. Therefore, it is clearly 'an important indicator of control over information exchange or resources flows within a network'.<sup>75</sup>

As originally proposed by Freeman,<sup>76</sup> betweenness centrality is given by the formula:

$$C_B(N_i) = \sum_{j < k} \frac{g_{jk}(N_i)}{g_{jk}}$$

In the above formula,  $g_{jk}$  is the number of geodesic paths between the two nodes  $j$  and  $k$  (dyad), and  $g_{jk}(N_i)$  is the number of geodesics between  $j$  and  $k$  that contain node  $i$ . Then, dividing  $g_{jk}(N_i)$  by,  $g_{jk}$  measures the proportion of geodesic paths connecting  $j$  and  $k$  in which node  $i$  is involved. Summing across all the dyads not including node  $i$  measures the extent to which  $i$  sits on the geodesic paths of the other network members.<sup>77</sup> Again Wasserman and Faust suggest standardizing the actor betweenness centrality by dividing it by the maximum theoretical value of  $\frac{(g-1)(g-2)}{2}$  (assuming that each pair has only one geodesic) according





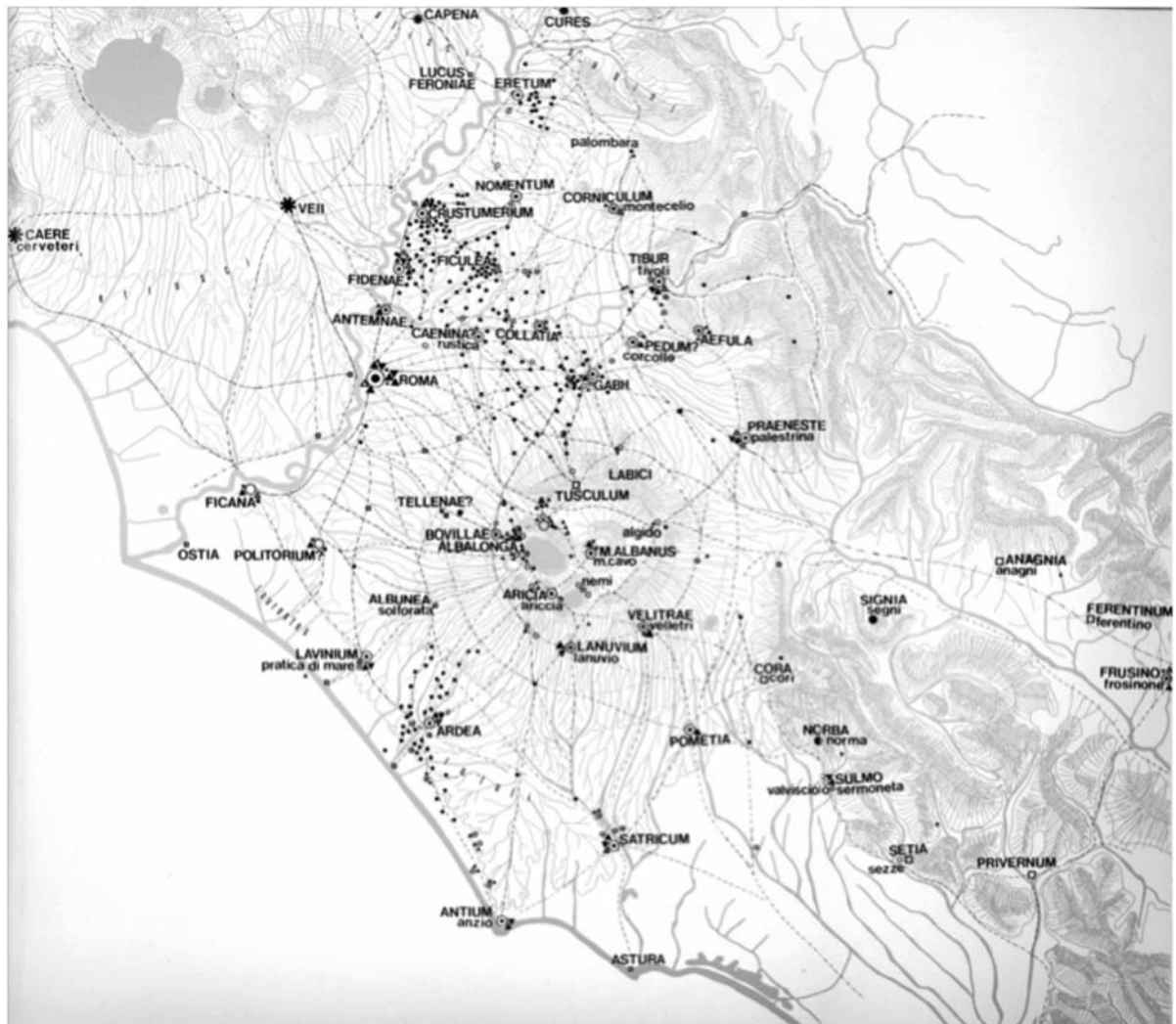


Fig. 5. Terrestrial routes used to model the road networks of Early Iron Age, Orientalizing and Archaic Age Latial settlements (from Colonna 1976, pl. 1).

tance in relation to settlements size and other variables.<sup>84</sup> However, in this case it has been decided to keep the two variables independent because settlements size will be one of the elements against which results will be analysed and therefore it would not be correct to consider it as a variable in the analysis.

The rivers and road networks have been modelled by connecting two sites directly and reciprocally reachable via a river or a road (see examples in Appendix 2). The river network has been based on digital data provided by Regione Lazio. In particular, rivers associated in modern time with alluvial soils have been included for the study, because they are more likely to have been

consistent and more important for middle and long distance communication also in antiquity.<sup>85</sup>

As already mentioned, the road networks have been modelled on routes reconstructed by Guaitoli for the Final Bronze Age (fig. 4)<sup>86</sup> and Quilici and Quilici Gigli for the Early Iron Age (fig. 5).<sup>87</sup> Again middle and long distance routes have been considered. Although both studies used are not very recent, their validity seemed to be confirmed by the fact that novel sites, discovered by more recent research, superimposed on Guaitoli's and the Quilici's maps, show a very good alignment with routes already identified by those scholars.

As introduced in the previous section, centrality social network analysis indexes have been

compared with ‘central places’ predicted by settlement size and contextual archaeological knowledge. In particular, for each index, settlements have been ranked from the highest to the lowest scores and the first ‘N’ highest scores have been highlighted, where ‘N’ corresponds to the number of settlements predicted to be central by settlements size. Then the number of settlements predicted to be central by each centrality index and at the same time by settlement size, have been counted and calculated in percentages against the total number of settlements predicted to be central solely by size. In this way, it has been possible to evaluate in terms of percentage the number of central places correctly predicted by social network analysis centrality indexes.

In table 1 the figures, calculated for the degree centrality of the Early Iron Age 2 roads network have been shown as an example. In this case 24

settlements are considered to be primary centres or central places, according to their size; and 16 of these settlements are predicted to be central by the degree centrality index, calculated for the network modelled on road connections. This means that this type of model has a success of prediction of the 67%, which is normally considered more than acceptable (see also below).<sup>88</sup> The same calculation has been performed for all three types of indexes (degree centrality, betweenness centrality and closeness centrality) and for all three types of networks (Delaunay triangulation networks, rivers networks and road networks).

Table 2 summarises the results of the calculation of the percentages of correctly predicted central place sites for each phase, according to the three indexes for the three types of networks, in relation to the sites predicted to be central for each phase by their size; and figures 7, 8 and 9

vertexID	settlement	size	area	Normalized Degree Centrality	Predicted Central Sites	Percentage of Predicted Central Sites
1	<i>Roma</i>	1	2100000	0.13207547	1	
2	<i>Gabii</i>	1	918782	0.113207547	1	
3	<i>Ardea</i>	1	848969	0.075471698	1	
4	<i>Alba</i>	1	756100	0.028301887		
5	<i>Ficulea</i>	2	552989	0.08490566	1	
6	<i>C. della Coedra-Cora</i>	2	542885	0.056603774	1	
7	<i>Crustumerium</i>	2	519072	0.037735849		
8	<i>Satricum</i>	2	507406	0.075471698	1	
9	<i>Astura</i>	3	464995	0.028301887		
10	<i>Cisterna di Latina</i>	3	448530	0.066037736	1	
11	<i>Fidenae</i>	3	413473	0.056603774	1	
107	<i>Gallicano</i>	3	397783	0.047169811		
12	<i>Valmontone-Tolerium</i>	3	394611	0.075471698	1	
13	<i>Corcolle</i>	3	335871	0.028301887		
14	<i>Lavinium</i>	3	334476	0.08490566	1	
15	<i>Bovillae</i>	3	298673	0.056603774	1	
16	<i>Velletri</i>	3	287060	0.056603774	1	
17	<i>Tivoli</i>	3	280989	0.056603774	1	
18	<i>Lunghezza-Collatia</i>	3	279314	0.066037736	1	
19	<i>Ficana- M. Cugno</i>	3	254142	0.037735849		
20	<i>Palestrina</i>	3	242783	0.056603774	1	
21	<i>T. Torrino-Politorium?</i>	3	229770	0.037735849		
22	<i>Tellenae</i>	3	213244	0.08490566	1	
23	<i>S. Giovanni in C.</i>	3	208097	0.037735849		
<b>Totals</b>			<b>24</b>	<b>24</b>	<b>16</b>	<b>67</b>

Table 1. Settlements predicted to be central by the normalized degree centrality (in dark grey, while missed central settlements are blank), compared against settlements predicted to be central by their size (sizes 1-2 and 3), for the road network of Early Iron Age 2 Latium vetus.

		Final Bronze Age 1-2	Final Bronze Age 3	Early Iron Age 1 Early	Early Iron Age 1 Late	Early Iron Age	Orienta- lizing Age	Archaic Age
<b>Degree Centrality</b>	Delaunay Networks	42	57	30	38	54	57	60
	Rivers Networks	42	54	45	48	38	46	43
	Road Networks	47	39	50	48	65	61	67
<b>Betweenness Centrality</b>	Delaunay Networks	37	36	35	43	31	50	57
	Rivers Networks	32	39	40	43	38	36	53
	Road Networks	42	43	35	48	54	50	57
<b>Closeness Centrality</b>	Delaunay Networks	32	36	45	33	35	36	60
	Rivers Networks	37	39	30	43	35	32	50
	Road Networks	32	46	25	38	46	46	53

Table 2. Percentages of settlements correctly predicted to be central by social network analysis indexes in comparison with settlement predicted to be central by their size. Percentages above 50 % (considered to be successful in similar analyses, Rihll/Wilson 1991, 73) are highlighted in grey.

present the same results plotted on bar charts. As can be seen from the summary table and the bar charts, all the percentages of correctly predicted central place sites for the different types of networks by the different centrality indexes are above 30%. The only exception is represented by the closeness centrality calculated on the road networks for the Early Iron Age 1 Early (950/925-900 BC ca) with the lowest rate of success at only the 25%. In particular, it is important to note that most percentages of correctly predicted central place sites are above 40%, which, in similar studies, is considered a reasonable percentage of success.<sup>89</sup>

When comparing the rates of correctly predicted central place sites by the different indexes, in relation to the different types of networks, the highest percentages are given by the degree centrality and the betweenness centrality calculated on the Delaunay and road networks for the later phase of the Early Iron Age (Early Iron Age 2), the Orientalizing and Archaic Ages. In particular, it seems that these percentages grow slightly from earlier to later phases. On the contrary, the sites predicted to be central by centrality indexes calculated on river communications have the worst percentages of correctly predicted central sites. In particular, the lowest percentages are related to

the late Early Iron Age (Early Iron Age 2) and the Orientalizing Age.

This seems to imply that first degree connections (Delaunay networks) and terrestrial communications (road networks) were determinant factors in the formation of central places in *Latium Vetus* during the late Early Iron Age and subsequent phases (Early Iron Age 2, Orientalizing and Archaic Age). In particular, easy access to exchange and information, facilitated by a high number of neighbours (degree centrality), and the control over the flow of information and exchanges through the whole network (betweenness centrality) seem to have been key elements in their development.

However, as mentioned earlier, and in contrast with the above results, the low percentages of correctly predicted central places by centrality indexes, calculated on rivers networks, seem to indicate a less important role of fluvial routes as a mean of communications between centres at that time; at least this seems to be the case at the local, intra-regional level, within the limit of *Latium Vetus*. Enlarging the network, by including Etruscan centres on the other side of the Tiber or other centres from neighbour regions (inter-regional level), would probably give different results.

The significance of terrestrial communications



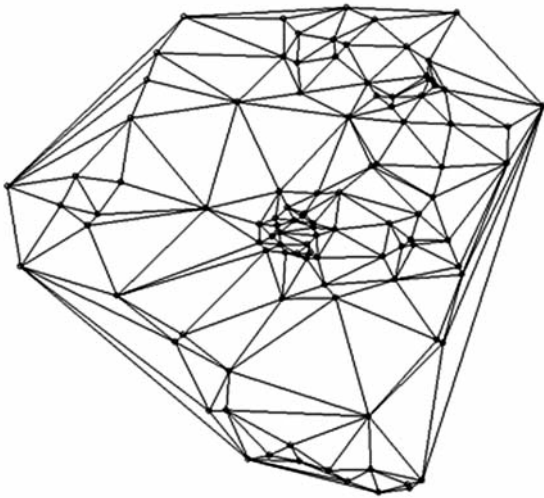


Fig. 6. Network of Early Iron Age 2 Latial settlements, modelled by using the Delaunay triangulation.

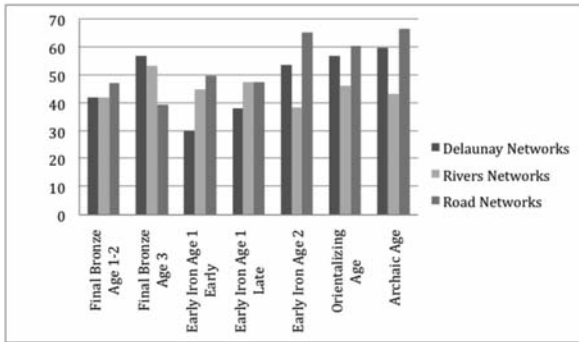


Fig. 7. Percentages of Latial settlements predicted to be central by the normalized degree centrality index in relation to settlements predicted to be central by their size.

for the Early Iron Age 2 and subsequent phases seems to be confirmed by the result of the percentage of corrected predicted central sites, based on the calculation of the closeness centrality for the road networks. This index, which measures the extent to which a node is able to communicate with all other nodes of the network, on the basis of the shortest distance, that is the minimum number of links or intermediaries, rates 47% of successfully predicted central places, which is high, although not quite the 50%, which can be considered fully successful.<sup>90</sup>

The importance of easy access to interactions and control over flow of information and goods,

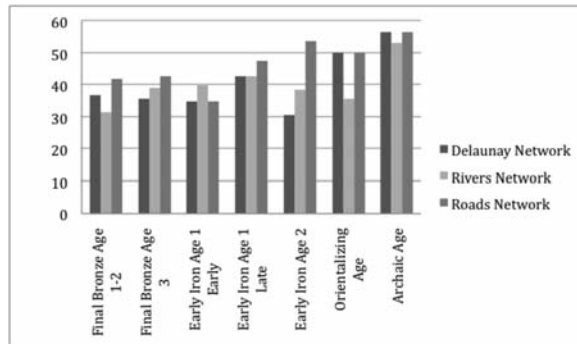


Fig. 8. Percentages of Latial settlements predicted to be central by the betweenness centrality index in relation to settlements predicted to be central by their size.

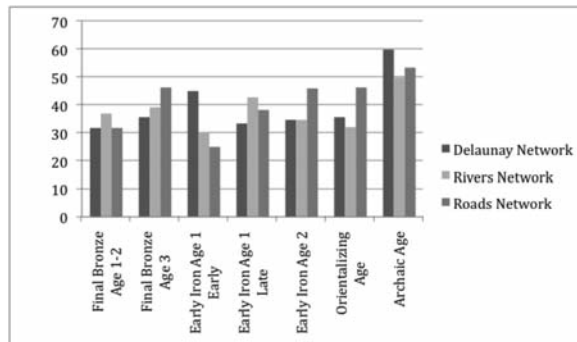


Fig. 9. Percentages of Latial settlements predicted to be central by the closeness centrality index in relation to settlements predicted to be central by their size.

especially on terrestrial routes networks, highlighted by the above results seem to be consistent with the historical interpretation by other scholars, who adopted different approaches. In particular di Gennaro suggested the importance of control over terrestrial communication routes (and therefore trade and commerce) for the development of proto-urban and urban Latial centres.<sup>91</sup>

Similarly, Jelle Bouma and Elisabeth van 't Lindenhout studying the architectural and spatial organization of three coastal towns of archaic Latium (6<sup>th</sup> century BC), noticed that in all of them 'one of the main regional roads crosses the urban area in a straight line' and that 'a traveller in Latium could not avoid passing through the towns'.<sup>92</sup> As emphasised by these authors, people passing through Latial urban centres would have been engaged in transhumance or commerce and would probably have to pay a toll for their pas-



sage.<sup>93</sup> In particular, these scholars advanced the hypothesis that people controlling these passages and their tolls would have been local people, engaged in residential activities such as cults, rituals or agriculture.<sup>94</sup>

The greater importance of terrestrial routes for Early Iron Age and Archaic central Italy proto-urban and urban settlements, suggested by di Gennaro, Bouma and van 't Lindenhout and previous scholars, has also been demonstrated by the analysis of settlements' location, conducted by U. Rajala in Etruria<sup>95</sup> and myself in *Latium Vetus*.<sup>96</sup> Both studies detected, during the Early Iron Age (especially the later phase), and the following Orientalizing and Archaic Ages, a greater and growing importance for settlements location of accessibility to terrestrial routes, at the expense of river communications; particularly in contrast to the Final Bronze Age, when waterways seem to have been more relevant as a mean of transport.<sup>97</sup>

Again, these interpretations are consistent with the results from analyses conducted in this work. In fact, in relative terms, the percentages of successfully predicted central sites for the rivers networks are generally slightly higher (although the decreasing trend is not dramatically clear) for the late Final Bronze Age (Final Bronze Age 3) and the early phases of the Early Iron Age (Early Iron Age 1 Early or 950/925-900 BC ca; and Early Iron Age 1 Late, or 900-850/825 BC ca), than for the subsequent Early Iron Age 2 and Orientalizing Age. The high percentage of correctly predicted sites for the Archaic Age might indicate a renewed importance for this phase of river communications, confirmed by the appearance of a number of new key sites along the Tiber to the south of Rome, such as Rupe di S. Paolo, Forte Ostiense and Sito dell'Eur.

The success of the degree centrality and the betweenness centrality with the Delaunay network is more difficult to assess in terms of historical interpretation. The model itself is built in a way which establishes links to nearest neighbour sites; however the number of nearest neighbours (on which the calculation of the degree centrality is based) is not determined by the model, but by their geographical location, which ultimately depends on the choice of their settlers.

Therefore, it can be reasonably excluded that the success of correctly predicted central place sites by the degree centrality index, calculated on the Delaunay networks, is due to the design of the model itself. To better evaluate this result, it would be interesting to analyze more specific 'economic', 'cultural' or 'social' contacts and inter-

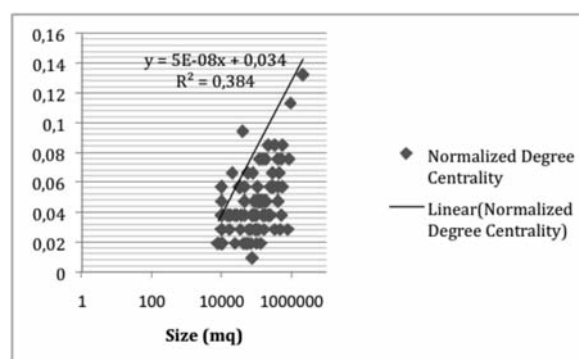


Fig. 10. Road Network of Early Iron Age 2 Latial settlements: correlation graph between settlements' size and the normalized degree centrality index.

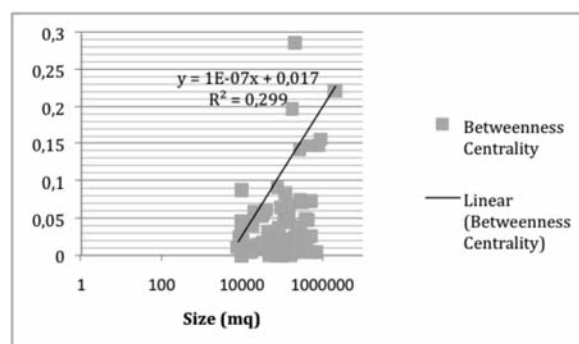


Fig. 11. Road Network of Early Iron Age 2 Latial settlements: correlation graph between settlements' size and the betweenness centrality index.

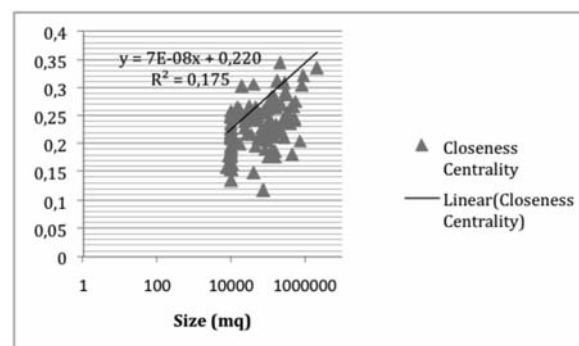


Fig. 12. Road network of Early Iron Age 2 Latial settlements: correlation graph between settlements' size and the closeness centrality index.

actions by studying networks modelled on the basis of the distribution of imports and or particular styles of objects/pots and/or their decoration. In this way it would be possible to better

understand to what extent first degree contacts (direct links with no intermediaries) are more or less significant than contacts with more distant nodes of the networks (see also below the section Further Research Perspectives).<sup>98</sup>

Finally the correlation between social network analysis centrality indexes and settlements' size (which, as mentioned earlier, in this study is an independent indicator of centrality, based on archaeological and historical knowledge), has been verified statistically through regression analysis. Figures 10, 11 and 12 show, for example, the graphs of the correlation between settlements' size and social network analysis centrality indexes, calculated for the road networks during the Early Iron Age 2.

As shown in the graphs, the correlation between settlements' size and the normalized degree centrality appears to be positive and significant with a correlation coefficient value ( $R^2$ ) of 0.384; the correlation between settlements' size and betweenness centrality is also reasonably strong, with a correlation coefficient value of 0.299. On the contrary, the correlation appears to be weaker for the closeness centrality with a correlation coefficient value of 0.175.

Figures 13, 14 and 15 show the results of the comparison of the coefficients of the correlations between settlements' size and their grade of centrality, based on the different centrality indexes, calculated for the various networks in the different phases. From these graphs, the correlation between settlements' size and social network analysis centrality indexes scores seems to be stronger for the degree centrality and the betweenness centrality; especially those calculated on road networks during the Early Iron Age and subsequent phases, with correlation coefficient values ( $R^2$ ) between 0.2 and 0.5.

This is consistent with the results of the analyses, which gave particularly high percentages of correctly predicted central place sites by the degree centrality and the betweenness centrality calculated on road networks. However, while in those cases the percentage of correctly predicted central place sites increased in the later phase of the Early Iron Age (Early Iron Age 2) and subsequent phases (Orientalizing and Archaic Ages), the strength of the correlation between settlements' size and the degree and betweenness centrality indexes seemed to follow, in relative terms, an opposite decreasing trend.

Differently from the other two indexes, while relatively higher for the road networks, the coefficient values of the correlation between settle-

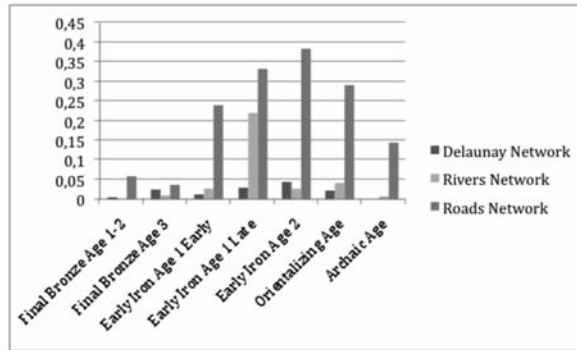


Fig. 13. Histogram of statistical correlation ( $R^2$ ) values between Latial settlements' size and their normalized degree centrality index scores.

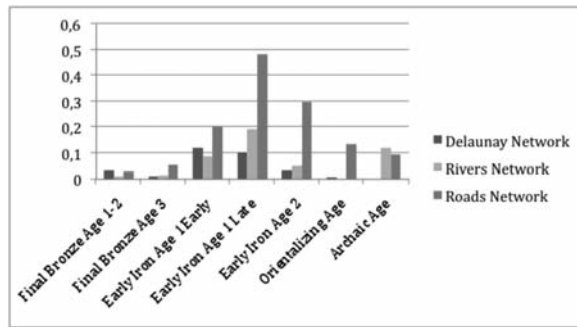


Fig. 14. Histogram of statistical correlation ( $R^2$ ) values between Latial settlements' size and their betweenness centrality index scores.

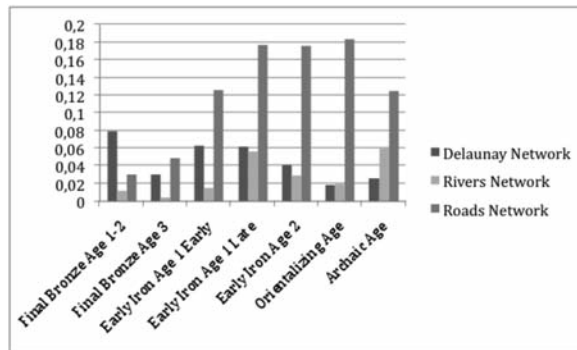


Fig. 15. Histogram of statistical correlation ( $R^2$ ) values between Latial settlements' size and their closeness centrality index scores.

ments' size and the closeness centrality index scores, are never higher than 0.2. Similarly, the coefficient values of the correlation between settlements' size and centrality indexes scores for the Delaunay networks are generally rather low, nor-

mally below 0.1-0.2. Finally, the coefficient values of the correlation between settlements' size and centrality indexes scores, calculated on the rivers networks, only appeared to be relatively high for all three indexes, during the Early Iron Age 1 Late (900-850/825 BC ca), and only for the closeness and betweenness centrality, during the Archaic Age (580-509 BC ca).

To conclude, the application of regression analysis to mathematically evaluate the correlation between settlements' size (as already mentioned, an 'archaeological' indicator of centrality used as independent benchmark to evaluate centrality predicted by social network analysis indexes) and social network analysis centrality indexes, calculated on the different types of networks, seemed to validate the good correspondence between larger, nucleated settlements (central places) and higher degree centrality and betweenness centrality scores.

It also confirmed the greater importance of terrestrial routes for the development of Latial central place sites during the late Early Iron Age and subsequent phases; although, as mentioned earlier, in relative terms, the percentage of correctly predicted sites has an increasing trend from earlier to later phases, and the values of the correlation coefficient between settlements' size and centrality indexes have an opposite trend. Finally the greater significance of rivers communication for settlement location in the Final Bronze Age, partially suggested by the analysis results did not appear prominent from the statistical assessment.

#### SOCIAL NETWORK ANALYSIS AND PROTO-URBAN / URBAN CENTRES IN CENTRAL ITALY: FURTHER RESEARCH PERSPECTIVES

In the present application of social network analysis in relation to proto-urban and urban centres in middle Tyrrhenian Italy only a limited number of networks have been considered: an ideally geometric network, rivers and roads. This application has been based on the assumption that roads and rivers imply contacts and exchanges of goods and ideas. However, further enhancements of this project could consider specific indicators of social relationships or cultural bonds such as pot decorations, imported goods or other characteristics of the settlements such as the presence of city fortifications or sanctuaries.

Literary sources could also be used to assess the extent of religious or political networks. For example, the participants in the Latin League, which annually celebrated the Latin feast on the Monte Cavo in the Alban Hills could be analysed

as a network while the progressive conquests of Rome in Latium and further into Italy could be studied as an expanding network. Epigraphic evidence, such as Etruscan onomastic inscriptions could also be used to explore inter-cities links and family politics and alliances.

In addition, the area of study could be enlarged and a number of pre-Roman populations could be taken into account such as Etruria, the Sabine, Faliscan and Capenates regions, allowing for new comparative perspectives and possibly new insight on boundary issues among those communities. With particular reference to permeable frontiers, another potential case study would be the river Tiber and the network of sites along its basin.

When considering social network analysis as a tool, this article has presented a systemic approach, which considered the networks in their totality; however, an ego-network (or individual) approach is also possible, which considers particular, singular, sites in relation to all others. In this case it would be interesting to choose a few case studies, considering sites which succeeded and sites which did not succeed, and compare their position and characteristics within the network.<sup>99</sup>

In this application, specific social network analysis software, such as Pajek, has been adopted for the analysis. However, social network analysis (especially in relation to spatial problems and transportation) can be implemented within a GIS environment too.<sup>100</sup> In particular, a specific utility (SANET) has been developed by Atsu Okabe, Kei-ichi Okunuki, Shino Shiode and their team to perform spatial analysis on networks and analyse specific events that might occur along a network, such as car crashes on roads etc.<sup>101</sup>

With specific reference to spatial analysis within archaeology, similar questions and developments are being carried out by using other tools/methods such as Space Syntax. Although, to my knowledge, this method has been mainly used within an urban or built environment (infra-site), it could be probably used for wider scale (inter-sites) studies as well. Again, in the Netherlands I had the occasion to learn about this topic from Hanna Stöger and the Space Syntax research group from Leiden University.<sup>102</sup>

When considering social network analysis as an approach for the study of urbanization and the development of central places, this article has demonstrated the advantages of considering cities as a network, where not only nearest neighbours settlements are taken into account (as for exam-

ple in traditional central place theory and other locational models) but also more distant settlements (within the whole system). However, as suggested by Douglas R. White,<sup>103</sup> the future challenge seems to be the integration, rather than the opposition between apparently conflicting models, such as the rank-size rule and social network theory, and/or the integration of these models with the theory of social fission versus corporate community, recently introduced in the debate on early Greek urbanization by John Bintliff.<sup>104</sup>

On a more theoretical level Actor-Network-Theory, introduced by Bruno Latour and other scholars, might provide the philosophical background rarely made explicit in social network applications. According to Latour, both technical networks (such as electricity, trains, sewages, internet and so on) and social networks can be represented by dots and lines but the former exist objectively, independently from the researcher, while the latter only 'represents one informal way of associating together human agents'.<sup>105</sup> In other words, according to Latour, 'work net' or 'action net', is only a concept or a way for sociologists to make sense of intangible realities such as 'society', 'culture', 'fields' etc.<sup>106</sup>

At this point, it should be noted that one of the stronger features of social network analysis is its ability to investigate and compare 'underlying frames'<sup>107</sup> that connect different agents, which might, or might not, be human. In this sense a deeper dialogue between actor network theorists (ANTs) and social network analysts, while complex, is desirable and potentially very rewarding.

## CONCLUSIONS

This article presented an application of social network analysis principles to archaeological data. The purpose of the work was to verify the potential of social network analysis centrality indexes by using them to predict the emergence of central places. The case study has been built on Latial settlements from the Final Bronze Age to the Archaic Age. In fact, the main points of the evolution of these sites from small and dispersed Bronze Age villages to centralised, nucleated and large proto-urban and urban centres are already known from archaeological and historical evidence.

In this way it has been possible to compare sites predicted to be central by social network centrality indexes against sites already known to be central according to their size and contextual archaeological evidence. The experiment demonstrated that there is positive correlation between

known settlements of given sizes with some social network centrality indexes.

In particular, the actor degree centrality, which is based on the number of its direct links to other actors/nodes (first degree neighbours), and the betweenness centrality, which measures the probability of a node to be visited if communications are exchanged between all other pairs of nodes in the network, via the shortest distance or geodesic (the minimum number of links/intermediaries), scored the highest percentage of correctly predicted central place sites.

These results seemed to indicate that access to information and interactions by the mean of numerous first degree neighbours (as indicated by the good results given by the degree centrality), and the control over flow of communications and exchanges (indicated by the good rates of correct predictions given by the betweenness centrality), were important factors in the development of proto-urban and urban central places in *Latium Vetus*. On the contrary, closeness and short distance (minimum number of links) to all other nodes of the network, seemed to have been a less important element, as indicated by the poorer percentages of central place sites correctly predicted by the closeness centrality index.

The degree centrality and the betweenness centrality indexes were particularly successful, when calculated on the Delaunay and the road networks, during the Early Iron Age 2, Orientalizing and Archaic Ages. While the social network analysis indexes calculated on rivers network gave the poorest percentage of correctly predicted central place sites, although in relative terms those of the Final Bronze Age and Early Iron Age 1 were slightly higher than those of later phases.

The high prediction rates of the degree centrality and the betweenness centrality on roads networks during the later phase of the Early Iron Age and subsequent phases and the relatively higher scores of the centrality indexes on the rivers networks during the Final Bronze Age and the first phases of the Early Iron Age, are consistent with the historical interpretation already advanced by other scholars, who adopted different approaches.

In fact, a number of studies have independently suggested that, at least at a local, intra-regional level, in *Latium Vetus* (and also in Etruria) the importance of rivers as a mean of communication declined from the Final Bronze Age to the Early Iron Age, when terrestrial routes and their control, became more important in the formation of central places (proto-urban and urban centres).



As mentioned above, the positive prediction results of the social network centrality indexes, calculated on the Delaunay networks are more difficult to evaluate. It can be noted that they are consistent with the poorer results of the closeness centrality index and point to a greater importance of interaction with close neighbours than more distant nodes. This might be logical, because in this case study 'contacts' and 'interactions' have been assumed to be equal and reciprocal in any direction and the main variables considered have been ultimately 'geographical', such as rivers, terrestrial routes and settlement reciprocal location.

In this sense, as previously discussed, it would be interesting to compare the results from this study with analyses conducted on networks based on 'directed' and possibly 'valued' economic, cultural and social relations, indicated by 'cultural' and 'social markers' such as the distribution of imports, and/or particular styles/decorations of pots and objects.

Finally, the major role of interactions with neighbours (degree centrality) and the importance of the control over communication and exchanges

(betweenness centrality) especially on terrestrial routes during the later part of the Early Iron Age, Orientalizing and Archaic Age, indicated by the analyses, has been confirmed by the statistical evaluation of the results; although while the percentage of predicted correct central place sites augmented in the later phases the correlation between settlements' size and centrality indexes became relatively weaker. As mentioned earlier, the importance of rivers communications for central place sites during the Bronze Age and early phases of the Early Iron Age, suggested by analyses, was not proved by statistical evaluation.

To conclude, while the association between central places and some of the social network analysis indexes used in this study, could not conclusively be proved by statistical assessment, the consistency of the results with independent archaeological and historical interpretation by different scholars, who have adopted different approaches, demonstrates that social network analysis techniques can offer great potential in archaeological research, and it is worth pursuing new studies which apply its principles.

## APPENDIX 1

*Final Bronze Age Latial settlements (LS = known only from ancient authors)*

Settlement	Area (ha)	Final Bronze Age 1-2 (1175/1150-1050/1025 BC ca)	Final Bronze Age 3 (1050/1025-950/925 BC ca)
Pratica di Mare ( <i>Lavinium</i> )	23		x
Alba-Tofetti	21	x	x
Gabii	18	x	x
Roma-Palatino	17	x	x
Ardea-Civitavecchia	17		x
C. della Fragola	17	x	x
M. di Leva	13	x	
Marino ( <i>Castrimoenium</i> )	12		x (LS)
Labico ( <i>Bola?</i> )	12		x (LS)
M. Morra	10	x	x
Roma-Campidoglio	10	x	x
Valmontone ( <i>Tolerium?</i> )	10		x (LS)
Buon Riposo ( <i>Longula?</i> )	10		x (LS)
Alba-Cappuccini	10	x	x
C. del Vescovo	9	x	x
M. S. Angelo in Arcese ( <i>Aefula?</i> )	8	x	x
M. Cugno ( <i>Ficana</i> )	8	x	x
Fontan Tempesta	8		x
Borgo Sabotino s.s.a.	8	x	x
M. Savello	8		x
Ariccia ( <i>Aricia</i> )	7		x (LS)



Settlement	Area (ha)	Final Bronze Age 1-2 (1175/1150-1050/1025 BC ca)	Final Bronze Age 3 (1050/1025-950/925 BC ca)
Fosso della Bottaccia	7	x	x
Albano Laziale	7		x
C. dell'Asino	6		x
Porta Neola	6	x	x
Gallicano ( <i>Pedum?</i> )	5		x (LS)
Casale Nuovo	5	x	
Corcolle ( <i>Querquetulum?</i> )	5	x	x
Tivoli ( <i>Tibur</i> )	5		x
<i>Ficulea</i> -Acropoli	5	x	x
C. Rotondo	5	x	
Tor de Cenci	5	x	x
Campo del Fico	5	x	x
Castel S. Pietro	4		x
C. della Mola	4	x	
Castellaccio	4		x
C. Ripoli	4	x	x
Montecelio-M. Albano ( <i>Corniculum?</i> )	4	x	x
<i>Lavinium</i> -Acropoli	4	x	
T. Torrino ( <i>Politorium?</i> )	4	x	x
<i>Ardea</i> -Acropoli	4	x	x
M. Artemisio	4	x	x
Montecelio-centro ( <i>Corniculum?</i> )	4	x	x
Castelgandolfo	3		x
M. dei Ferrari	3	x	x
M. Cavo	3		x
Sorgente Preziosa	3		x
Maschio d'Ariano ( <i>Cusuetani?</i> )	3	x	x
<i>Satricum</i> -Acropoli	3	x	x
Fosso di S. Colomba	3	x	x
Torre Acqua Raming	3		x
<i>Tusculum</i> -Acropoli	3	x	x
Velletri	2		x
M. Crescenio ( <i>Apiolae?</i> )	2		x
Casale della Perna	2	x	x
Tor Caldara	2		x
<i>Antium</i> -Acropoli	2	x	x
A.A. Laurentina	2	x	x
Sacco Muro	2	x	x
Grottaferrata-S.V.	2		x
M. Cucco	1		x
Poggio Tulliano	1		x
La Rustica ( <i>Caenina</i> )-Acropoli	0	x	x
Torre del Giglio	1	x	x
Bosco Nettuno	1	x	x
Pelliccione	1	x	x
Le Grottacce-villa	1	x	

Settlement	Area (ha)	Final Bronze Age 1-2 (1175/1150-1050/1025 BC ca)	Final Bronze Age 3 (1050/1025-950/925 BC ca)
Stop 4-La Banca	1	x	x
Via Riserve Nuove	1	x	x
Villa Maldura	1		x
Valle Violata B	1		x
Via Lucrezia Romana	1	x	x
Santuario di Diana	1		x
Camposelva	1	x	x
O. del C.-Quadrato	1	x	
Casa Calda	1	x	
Pozzo Carpino	1		x
O.del C.-Tor di Mezz. A	1	x	x
Cave di Breccia	1	x	
S. Pastore	1	x	x
Fosso Tavernucolo	1	x	x
Fosso dell'Inviolata	1	x	
Le Caprine	1	x	x
Lago delle Colonnelle	1	x	x
Casale Redicicoli	1	x	
La Fibbia	1	x	x
Fosso Moscarello	1	x	x
Tivoli-Via di Poli	1	x	x
Ostia antica-borgo	1	x	x
Coste Caselle	1		x
Le Salzare	1		x
Prato della Corte	1		x
Castel Madama	1	x	
Paluzzi	1	x	x
O. del C.-Tor di Mezz. B	1	x	x
Marino-Conv. di C.	1		x
Casale Licia	1		x

*Early Iron Age, orientalizing and archaic Latial settlements (LS = known only from ancient authors)*

Settlement	Area (Ha)	Early Iron Age 1 Early (950/925-900 BC ca)	Early Iron Age 1 Late (900-850/825 BC ca)	Early Iron Age 2 (850/825-750 BC ca)	Orientalizing Age (750-580 BC ca)	Archaic Age (580-509 BC ca)
<i>Roma</i>	365		x (202)	x (210)	x (275)	x (365)
Sito dell'EUR	147				x	x
<i>Gabii</i>	92	x	x	x	x	x
<i>Ardea</i> -Casalazzara	85			x	x	x
<i>Alba</i>	76	x	x	x	x	x
Ponte Mammolo	65				x	x
<i>Roma</i> -Palatino	60	x				
Marco Simone Vecchio ( <i>Ficulea?</i> )	55		x	x	x	x
<i>Roma</i> -Campidoglio	55	x				

Settlement	Area (Ha)	Early Iron Age 1 Early (950/925-900 BC ca)	Early Iron Age 1 Late (900-850/825 BC ca)	Early Iron Age 2 (850/825-750 BC ca)	Orientalizing Age (750-580 BC ca)	Archaic Age (580-509 BC ca)
Colle della Coedra ( <i>Cora?</i> )	54	x	x	x	x	
Santa Maria delle Mole ( <i>Mugilla?</i> )	54					x
<i>Crustumium</i>	52	x	x	x	x	x
Borgo Le Ferriere ( <i>Satricum</i> )	51	x	x	x	x	x
<i>Astura</i>	46	x	x	x		
<i>Ardea-Civitavecchia</i>	46		x			
Cisterna di Latina ( <i>Pometia?</i> )	45	x	x	x	x	x
Villa Spada ( <i>Fidenae</i> )	41	x	x		x	x
Galliciano ( <i>Pedum?</i> )	40	x (LS)	x (LS)	x (LS)	x (LS)	x (LS)
Valmontone ( <i>Tolerium?</i> )	39	x	x	x	x	x
Casale Capobianco ( <i>Cameria?</i> )	34			x	x	x
Corcolle ( <i>Querquetulum?</i> )	34	x	x	x	x	x
Pratica di Mare ( <i>Lavinium</i> )	33	x	x	x	x	x
Rocca Priora ( <i>Corbio?</i> )	32					x
Velletri ( <i>Velitrae</i> )	29	x	x	x	x	x
Tivoli ( <i>Tibur</i> )	28	x	x	x	x	x
Lunghezza ( <i>Collatia?</i> )	28	x	x	x	x	x
Monte Cugno ( <i>Ficana</i> )	25		x	x	x	x
Palestrina ( <i>Praenestae</i> )	24	x	x	x	x	x
Tenuta Torrino ( <i>Politorium?</i> )	23			x	x	x
La Giostra ( <i>Tellenae?</i> )	21			x	x	x
San Giovanni in Camporazio	21	x	x	x	x	x
Rocca Massima ( <i>Carventum?</i> )	20					x
Mentana ( <i>Nomentum?</i> )	20			x	x	
Monte Giove ( <i>Corioli?</i> )	20	x	x	x	x	x
<i>Antemnae</i>	17			x	x	x
Colle della Fragola	17	x	x	x	x	
Monte Fiore	17					x
Sant'Angelo Romano	16			x	x	x
Montecelio ( <i>Corniculum?</i> )	15	x	x	x	x	x
Colonna ( <i>Labici?</i> )	15	x	x	x	x	x
Anzio ( <i>Antium</i> )	15		x	x	x	x
Lanuvio ( <i>Lanuvium</i> )	14	x	x	x	x	x
Guadagnolo	13	x	x	x		
Tuscolo ( <i>Tusculum</i> )	13	x	x	x	x	x
Marino ( <i>Castrimoenium</i> )	12	x (LS)	x (LS)	x (LS)	x (LS)	x (LS)
Labico ( <i>Bola?</i> )	12	x (LS)	x (LS)	x (LS)	x (LS)	x (LS)
Colli Santo Stefano	12			x	x	x
Ariccia ( <i>Aricia</i> )	12	x (LS)	x (LS)	x (LS)	x (LS)	x (LS)
Campo del Fico	11		x	x	x	x
Castel di Decima ( <i>Solonium?</i> )	11	x	x	x	x	x
Castel Savello ( <i>Apiolae?</i> )	11	x	x	x		
Monte Morra	10	x	x	x		
Tenuta Trafusa	10			x	x	x

Settlement	Area (Ha)	Early Iron Age 1 Early (950/925-900 BC ca)	Early Iron Age 1 Late (900-850/825 BC ca)	Early Iron Age 2 (850/825-750 BC ca)	Orientalizing Age (750-580 BC ca)	Archaic Age (580-509 BC ca)
Buon Riposo ( <i>Longula?</i> )	10	x (LS)	x (LS)	x (LS)	x (LS)	x (LS)
Torre Sant'Anastasio	10	x	x	x	x	x
Fosso del Cupo	10	x	x	x		
Colle del Vescovo	9	x	x	x	x	x
Rupe di San Paolo	9					x
Colle delle Crocette	8			x	x	
Monte Sant'Angelo in Arcese ( <i>Aefula?</i> )	8		x	x	x	x
Colle Lepre	8		x	x		x
Fontan Tempesta	8	x	x			
M. Savell	8	x	x	x	x	
Borgo Sabotino Sopra Strada Alta	8	x	x	x	x	
Monte Carnale	8	x		x	x	x
Le Ces	7			x	x	
Fosso della Bottaccia	7	x	x			
Albano Laziale	7	x	x	x	x	
Buglioncino	7					x
Porta Neola	6	x	x	x	x	x
Forte Ostiense	6					x
Monte Cavo	6	x	x	x	x	
Colle di Fuori	6		x	x		
L'Altare	6	x	x	x	x	
Castelgandolfo	5	x		x	x	x
Marco Simone ( <i>Ficulea?</i> )-Acropoli	5	x				
Passerano	5		x	x	x	x
Colle Rotondo	5	x	x		x	
Tor de Cenci	5					x
Colle Fiorito	5			x	x	x
Trigoria	4					x
Castellaccio	4	x	x		x	
Castellaccio	4			x	x	
Colle Ripoli	4	x		x	x	x
La Rustica ( <i>Caenina?</i> )	4			x	x	x
<i>Ardea</i> -Acropol	4	x				
Monte Artemisio	4	x	x	x	x	x
Colle Tasso	4	x	x	x	x	
Casal Boccone	3					x
Monte dei Ferrari	3	x	x	x	x	x
Colle Cimino	3	x	x	x		
Monte Crescenzo ( <i>Bovillae?</i> )	3	x		x	x	
Sorgente Preziosa	3	x	x		x	
Casale Redicicoli 2	3					x
Maschio d'Ariano	3	x	x	x	x	x

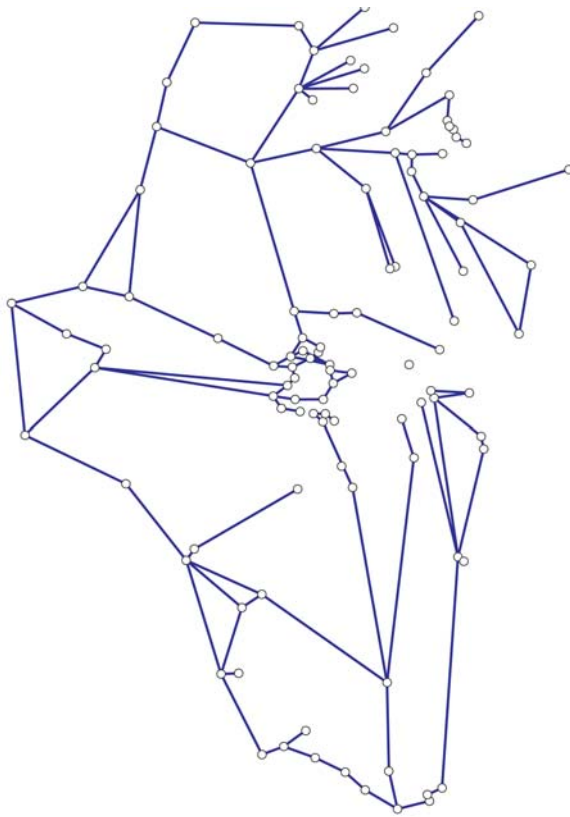
Settlement	Area (Ha)	Early Iron Age 1 Early (950/925-900 BC ca)	Early Iron Age 1 Late (900-850/825 BC ca)	Early Iron Age 2 (850/825-750 BC ca)	Orientalizing Age (750-580 BC ca)	Archaic Age (580-509 BC ca)
Monte Cucco	2	x		x		
Casale della Perna	2	x	x	x	x	
Tor Caldara	2		x			
Acqua Acetosa Laurentina	2	x	x	x	x	x
Colle Cesarano	2			x	x	x
Grottaferrata-Sopra Villa	2		x	x		
Galloro-Monte Gentile	2	x	x	x	x	
La Pasolina	1	x		x	x	
Poggio Tulliano	1	x	x			
Monte Arcese	1	x	x	x	x	x
Loricino	1			x		
Cretarossa	1			x	x	x
Bosco Nettuno	1	x	x			
Pelliccione	1	x	x		x	x
Torre Astura	1			x	x	
Acciarella	1	x	x	x		
Quartaccio	1	x	x	x		
Quartaccio Capanna	1	x	x	x		
Stop 4-La Banca	1	x	x			
Via Riserve Nuove	1	x				
Villa Maldura	1	x		x	x	
Tor delle Streghe	1				x	
Valle Violata B	1	x				
Camposelva	1	x	x			
Pozzo Carpino	1	x	x	x	x	
Finocchierelle	1	x	x	x		
Piani di Caiano	1	x	x	x		
Pescaccio	1	x	x	x	x	
Colle Pardo	1			x		
Vallericcia-Via di Mezzo	1			x	x	
Marco Simone Laghetto A	1			x	x	
San Pastore	1	x	x	x		
Le Caprine	1	x	x	x	x	x
La Fibbia	1	x	x			
Tivoli-Via di Poli	1	x				
Ostia antica-borgo	1	x	x			
Coste Caselle	1		x	x		
Orti Torlonia	1	x	x	x	x	
Prato della Corte	1	x	x	x	x	
Nettuno	1	x	x	x		
Paluzzi	1		x	x	x	
Casal Bruciato	1	x	x	x	x	x
Marino-Convento di Camporesi	1		x	x		
Mimose	1	x		x		



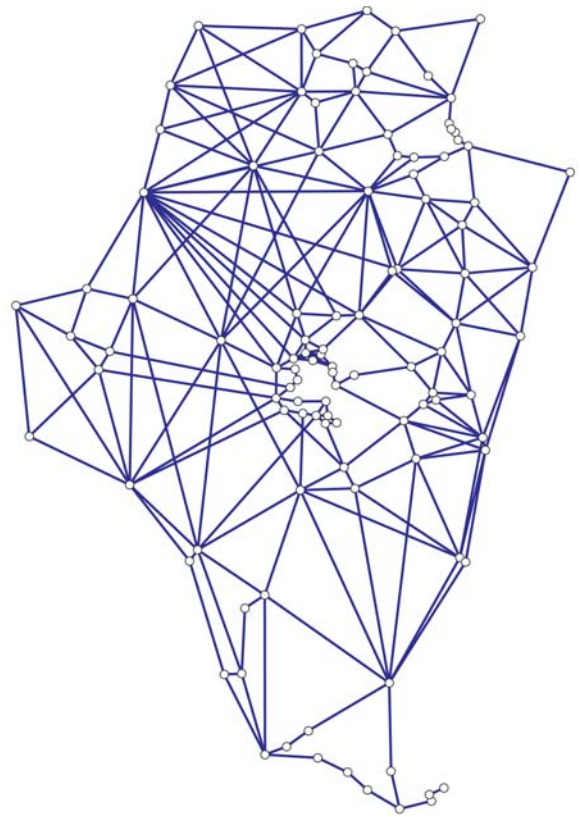
Settlement	Area (Ha)	Early Iron Age 1 Early (950/925-900 BC ca)	Early Iron Age 1 Late (900-850/825 BC ca)	Early Iron Age 2 (850/825-750 BC ca)	Orientalizing Age (750-580 BC ca)	Archaic Age (580-509 BC ca)
Casale Licia ( <i>Bovillae?</i> )	1	x	x			
Palazzolo	1			x		
Monteripoli	1	x	x	x	x	x
Colle Ripoli-bis	1	x		x	x	x

## APPENDIX 2

A. Rivers Network of Early Iron Age 2 Latial Settlements.



B. Road Network of Early Iron Age 2 Latial Settlements.



## NOTES

- \* This project was originally designed in collaboration with Dr. Bjoern Menze, under the auspices of the TiMe (Transformations in the Mediterranean 1200-500 BC) project, conducted by a team of scholars lead by Prof. Manfred Bietak of Vienna University (2006-2008). It was then initiated during the spring semester 2009 at the GCSC, Graduate Centre for the Study of Culture, of the Justus Liebig Universität in Giessen, Germany and conducted at NIAS, Netherlands Institute for Advanced Study in the Humanities and Social Sciences during the academic year 2009-2010. In both institutions the research profited from an interdisciplinary environment particularly favourable to such research. In particular, at Giessen I had insightful discussions with colleagues from the archaeology department such as Prof. Wolfram Martini and Prof. Anja Klöckner, the geography department with Dr. Stefan Henneman and doctoral researchers from the GCSC, namely Thies Bötcher and Alexander Friedrich. While at NIAS the project profited from precious inputs from Prof. Jan van Leewen, Dr. Jeroen Salman, Dr. Antheus Janse, Dr. Marten Jan Bok, Dr. Sholpan Gaisina and Dr. Joanna Tyrowic. In particular NIAS gave me the opportunity of collaborating with Prof. Wouter de Nooy, one of the leading experts in social network analysis, who provided help and support from the very beginning of the project. Finally I wish to thank Dr. Albert Nijboer, Prof. Peter Attema and their students, with Dr. Luca Alessandri, for their precious comments, when I first presented early results of this project in Groningen University; and Dr. Simon Stoddart, Dr. Francesco di Gennaro, Prof. Alessandro Guidi, Prof. John Bintliff and anonymous reviewers for their comments on an early draft of the article. All responsibility for mistakes, inaccuracies or omissions remains with the author.
- 1 Absolute chronologies adopted in this article take into consideration results from recent studies on Bronze Age and Early Iron Age chronologies in central Italy, based on dendrochronology and C 14 dating, such as Pacciarelli 2001, 2005; Nijboer 2005.
  - 2 See e.g. Meijers 2007 for a comparison between a traditional locational model, such as the central place theory, and the new network paradigm.
  - 3 In this study 'road' and 'road networks' refer to terrestrial routes, used in pre-historic, proto-historic and archaic times rather than the formally constructed roads from the later Republican and Imperial Periods.
  - 4 For example Buchanan 1998; see also Johnson 2001; Barabási 2002; Barabási 2003 and Watts 2003.
  - 5 Schnettler 2009.
  - 6 Travers/Milgram 1969.
  - 7 Knoke/Yang 2008.
  - 8 See for example Barabási 2003 and Watts 2003 for non specialist publications; or Newman et al. 2006 for a collection of more technical articles.
  - 9 UCINET, Pajek and Visone for example but see also the review by Huisman/van Duijn 2005.
  - 10 For example Scott 2000 or Knoke/Yang 2008.
  - 11 Stegbauer 2008 and Krempel 2008.
  - 12 See the classic manual Wasserman/Faust 2007, complemented by Carrington et al. 2005 or the more accessible Knoke/Yang 2008.
  - 13 For example Mayfair Mei-Hui 1994; see also Schweizer 1996a, b; Hage/Harary 1991, 1996.
  - 14 Lang 1997.
  - 15 Kappelhoff 2004 or a number of German PhD researches such as Walter 2004 or Müller-Prothmann 2006.
  - 16 Batty 2003; Fisher 2003; Masucci et al. 2009.
  - 17 Ter Wal/Boschma 2009.
  - 18 Barabási/Oltvai 2004.
  - 19 For example Gatrell 2005 on epidemic diffusion.
  - 20 Alexander/Danowski 1990.
  - 21 Ruffini 2008.
  - 22 Padgett 2001; Padgett/Ansell 1993; Shaw 2005 and McLean, P.D. 2007.
  - 23 For example, the group studying the reception of Dutch art in Asia, at NIAS during the academic year 2009/2010, has organized a session on *Social Network Analysis of Art Markets and Art Worlds in the Low Countries*, within the *Historians of Netherlandish Art Conference*, 'Crossing the Boundaries', held in Amsterdam on the 27<sup>th</sup>-29<sup>th</sup> of May 2010.
  - 24 Ikegami 2005.
  - 25 Orsen Jr. 2005.
  - 26 This type of research is, for example, being conducted by Alexander Friedrich, a doctoral candidate at the Graduate Centre for the Study of Culture (CSGC), of the Justus-Liebig Universität in Giessen, Germany.
  - 27 Knoke/Yang 2008, 6-9.
  - 28 Moreno 1934.
  - 29 Knoke/Yang 2008, 45.
  - 30 Harary 1969.
  - 31 See for example Krempel 2008, 215-216, fig. 1.
  - 32 Knoke/Yang 2008, 4.
  - 33 Lock/Pouncett 2007.
  - 34 Haggett/Chorley 1969.
  - 35 Müller 2009.
  - 36 Pitts 1965, 1978-1979.
  - 37 Dicks 1972 with discussion by Langton et al. 1972; and Hutchinson 1972.
  - 38 Rothman 1987.
  - 39 Irwin 1983; Irwin-Williams 1977.
  - 40 Santley 1991; Jenkins 2001; Graham 2006a, b, c, 2007, 2009; Sindbaek 2007b, a; and Isaksen 2008.
  - 41 Mackie 2001; Alexander 2008; Classen 2004; Classen in press; Classen/Zimmerman 2004.
  - 42 Wilkins 1991 and Smith 2005b.
  - 43 Nuninger 2002, 2003.
  - 44 A new project on *Tracing Networks. Craft Traditions in the Ancient Mediterranean and Beyond*, conducted since 2009 by the Universities of Leicester, Exeter and Glasgow and funded by the Leverhulme Trust, combines theories such as chaîne opératoire and cross-craft interaction, in order to study 'networks of crafts-people and craft traditions, asking how and why traditions, techniques and technologies change and cross cultural boundaries, and exploring the impact of this phenomenon', from the Project web page Introduction at <http://www.tracingnetworks.ac.uk/content/web/introduction.jsp> (24 February 2011).
  - 45 Wilkins 1991; Malkin 2003; Smith 2005b; Moore 2007; Sindbaek 2007a; and Malkin et al. 2009.
  - 46 Graham/Steiner 2006; Rihll/Wilson 1991; Evans et al. 2008, 2009.
  - 47 Partially initiated by Brughmans 2010.
  - 48 Cornell 1995.
  - 49 Di Gennaro/Peroni 1986; Peroni 1989, 1994, 1996, 2000; Stoddart/Spivey 1990; di Gennaro 1986a, 1988, 2000; di Gennaro/Guidi 2000; Guidi 1989, 2006; Barker/Rasmussen 1998; Smith 1996, 2005a; Pacciarelli 2001; and Torelli 2000.
  - 50 For this definition see Vanzetti 2004.

- 51 Di Gennaro/Peroni 1986; Peroni 1989, 1994, 1996, 2000; Stoddart/Spivey 1990; di Gennaro 1986a, 1988, 2000; Guidi 1989, 2006; Barker/Rasmussen 1998; Pacciarelli 2001; and more recently Rendeli 2009.
- 52 See various contributions in Fontaine 2010.
- 53 See di Gennaro/Guidi 2009 on central Italy or Fulminante/Stoddart 2012 for a comparative perspective on Etruria and *Latium Vetus*.
- 54 As mentioned earlier, new research shows that these generalisations, while useful, are now less valid because a greater local variability has to be taken into account (Fulminante/Stoddart 2012). For example Final Bronze Age material is known from Tarquinia both from the citadel and the plateau (Mandolesi 1999), while material earlier than the Iron Age is known from *Veii*, only from the *arx* of Isola Farnese (Bartoloni 2006); in both cases it has been suggested that the citadels (Civita di Castellina for Tarquinia and Isola Farnese for *Veii*) might have played a major role in the general inhabitation of the nearby plateaux, according to a model of occupation previously observed solely in *Latium Vetus*.
- 55 Pacciarelli 2001.
- 56 Pacciarelli 1994, 229.
- 57 Pacciarelli 1994, 240-241.
- 58 Pacciarelli 2001, 120-128.
- 59 Pacciarelli 2001, 120-128.
- 60 Fulminante forthcoming.
- 61 Di Gennaro 1986; see also di Gennaro/Barbaro 2008.
- 62 De Nooy et al. 2005. In addition, because this project has been conducted in the Netherlands thanks to a generous residential fellowship granted by the Netherlands Institute for Advanced Study in the Humanities and Social Sciences (NIAS), it has been possible to meet Wouter de Nooy, one of the developers of the software and leading expert in the discipline, who was very kind with his precious help and encouragement.
- 63 Guaitoli 1981.
- 64 Colonna 1976, pl.1.
- 65 Belardelli et al. 2007.
- 66 Kossinets 2006.
- 67 Vanzetti 2004.
- 68 For a number of examples see Fulminante 2003.
- 69 For a brief discussion see Carandini 1997, 459-463 with references.
- 70 Knoke/Yang 2008, 63.
- 71 Knoke/Yang 2008, 63.
- 72 Knoke/Yang 2008, 63, who quotes Wasserman/Faust 2007, 179.
- 73 Knoke/Yang 2008, 63-64.
- 74 Knoke/Yang 2008, 68.
- 75 Knoke/Yang 2008, 68-69 but see also the seminal papers by Freeman 1977 and White/Borgatti 1994.
- 76 Freeman 1977, quoted in Knoke/Yang 2008, 68.
- 77 Knoke/Yang 2008, 68.
- 78 Knoke/Yang 2008, 68, who quotes Wasserman/Faust 2007, 190.
- 79 Knoke/Yang 2008, 68.
- 80 Sabidussi 1966.
- 81 Knoke/Yang 2008, 65.
- 82 Beauchamp 1965, quoted by Knoke/Yang 2008, 66.
- 83 Already used by Broodbank 2000.
- 84 Evans et al. 2008, 2009.
- 85 Bietti Sestieri/Sebastiani 1986 and Gianni 1991.
- 86 Guaitoli 1981, 31 fig. 5.
- 87 Colonna 1976, pl.1.
- 88 Rihll/Wilson 1991, 73.
- 89 Rihll/Wilson 1991, 73.
- 90 Rihll/Wilson 1991, 73.
- 91 Di Gennaro 2000.
- 92 Bouma/van 't Lindenhout 1996-1997, 310.
- 93 Bouma/van 't Lindenhout 1996-1997, 311; see also Ampolo et al. 1980, 150.
- 94 Bouma/van 't Lindenhout 1996-1997, 311.
- 95 Rajala 1999.
- 96 Fulminante forthcoming.
- 97 See also Bietti Sestieri/Sebastiani 1986 and Angle et al. 1992.
- 98 For a similar approach see Classen/Zimmerman 2004.
- 99 I am currently exploring some of these strands of research, whose results will be presented in other works. I thank again Wouter de Nooy for discussing with me some of these ideas, in particular the potential of the ego-network approach.
- 100 See, for example, Batty 2003 or Fisher 2003.
- 101 Okabe et al. 2006 and the website developed since 2009: <http://sanet.csis.u-tokyo.ac.jp/index.html>, (24<sup>th</sup> February 2011)
- 102 See, for example, Stöger 2008.
- 103 White 2003; see already in this direction, also Santley 1991, combining central place with graph theory.
- 104 See for example Bintliff 1999, 2000, 2002, 2007.
- 105 Latour 2005, 129, quoting Mark Granovetter.
- 106 Latour 2005, 130-133.
- 107 It is here preferred to use the term 'frame' because the term 'structure' might imply something fixed and immutable and emphasise a static view rather than something more dynamic and agile.

## BIBLIOGRAPHY

- Alexander, C. 2008, The Bedolina Map: An Exploratory Network Analysis, in A. Posluschny et al. (eds), *Layers of perception: proceedings of the 35<sup>th</sup> international conference on Computer Applications and Quantitative Methods in Archaeology (CAA)*, Berlin, Germany, April 2-6, 2007, Bonn, 366-371.
- Alexander, M.C./J. Danowski 1990, Analysis of an ancient network. Personal communication and the study of social structure in a past society, *Social Networks* 12, 313-335.
- Barabási, A.L. 2002, *Linked. The New Science of Networks*, Cambridge, Mass.
- Barabási, B. 2003, *Linked. How Everything Is Connected to Everything Else and What It Means*, London.
- Barabási, A.L./Z.N. Oltvai 2004, Network biology: understanding the cell's functional organization, *Nature Reviews Genetics* 5, 101-113.
- Barker, G./T. Rasmussen 1998, *The Etruscans*, Oxford.
- Bartoloni, G., 2006. L'inizio del processo di formazione urbana in etruria. Analogie e differenze venute in luce nei recenti scavi, in *Tarquinia e le civiltà del Mediterraneo. Convegno Internazionale*, Milano, 22-24 Giugno 2004 (*Quaderni di Acme*, 77), Milano, 49-82.
- Batty, M. 2003, Network Geography. Relations, Interactions, Scaling and Spatial Processes in GIS, in D. Unwin (ed.), *Re-presenting GIS*, Chichester.
- Beauchamp, M. 1965, *An improved index of centrality*, *Behavioral Science* 10, 161-163.
- Belardelli, C. et al. 2007, *Repertorio dei siti protostorici del Lazio. Province di Roma, Viterbo e Frosinone*, Florence.
- Bietti Sestieri, A.M./R. Sebastiani 1986, Preistoria e Protostoria nel territorio di Roma. Modelli di insediamento e vie di comunicazione, *Archeologia Laziale* 7.2 (=Qua-



- dermi del centro di studio per l'archeologia etrusco-italica, 12), 30-69.
- Bintliff, J.L. 1999, Settlement and Territory, in G. Barker (ed.), *Companion Encyclopedia of Archaeology*, London/New York, 505-544.
- Bintliff, J.L. 2000, Settlement and territory: a socio-ecological approach to the evolution of settlement systems, in G. Bailey et al., *Human Ecodynamics*, Oxford, 21-30.
- Bintliff, J.L. 2002, Settlement Pattern Analysis and Demographic Modeling, in P. Attema et al., *New Developments in Italian landscape archaeology: theory and methodology of field survey land evaluation and landscape perception, pottery production and distribution. Proceedings of a three-day conference held at the University of Groningen, April 13-15, 2000*, Oxford, 28-35.
- Bintliff, J.L. 2007, Emergent Complexity in Settlement Systems and Urban Transformation, in U. Fellmeth, et al., *Historische Geographie der Alten Welt: Grundlagen Erträge, Perspektiven. Festschrift für Eckart Olshausen*, Zürich/New York, 43-82.
- Bouma, J./E. van 't Lindenhout 1996-1997, Light in Dark Age Latium. Evidence from settlements and cult places, in M. Maaskant Kleibrink (ed.), *Papers on Mediterranean Archaeology. Debating Dark Ages (= Caeculus 3)*, Groningen, 91-102.
- Broodbank, C. 2000, *An Island Archaeology of the Early Cyclades*, Cambridge.
- Brughmans, T. 2010, Connecting the dots: towards archaeological network analysis, *Ox/A* 29(3), 277-303.
- Buchanan, M. 1998, *Nexus: Small Worlds and the Ground-breaking Science of Networks*, New York.
- Carandini, A. 1997, *La nascita di Roma. Dei, lari, eroi e uomini all'alba di una civiltà*, Turin.
- Carrington, P.J. et al. 2005, *Models and Methods in Social Network Analysis*, Cambridge.
- Classen, E. 2004, Verfahren der 'Sozialen Netzwerkanalyse' und ihre Anwendung in der Archäologie, *Archäologische Informationen* 27, 219-226.
- Classen, E./A. Zimmerman 2004, Tessellation and Triangulations. Understanding Early Neolithic Social Networks, in K. Fischer Ausserer et al., *Enter the Past. Proceedings of the 30th CAA conference held in Vienna, Austria, April 2003*, Oxford.
- Colonna, G. (ed.) 1976, *Civiltà del Lazio Primitivo* (exhibition catalogue), Rome.
- Cornell, T.J. 1995, *The beginnings of Rome. Italy and Rome from the Bronze Age to the Punic Wars (1000-264 B.C.)*, London/New York.
- De Nooy, W. et al. 2005, *Exploratory Social Network Analysis with Pajek*, Cambridge.
- Di Gennaro, F. 1986, *Forme di insediamento fra Tevere e Fiume dal Bronzo Finale al principio dell'Età del Ferro*, Florence.
- Di Gennaro, F. 1988, Il popolamento dell'Etruria meridionale e le caratteristiche degli insediamenti tra l'età del Bronzo e l'età del Ferro, in G. Colonna et al., *Etruria meridionale. Conoscenza, conservazione e fruizione* (Atti del Convegno, Viterbo, 1985), Rome, 59-82.
- Di Gennaro, F. 2000, "Paesaggi di Potere": l'Etruria meridionale in età protostorica, in G. Camassa, et al., *Paesaggi di potere. Problemi e prospettive, Atti del Seminario Udine 16-17 maggio 1996*, Rome, 95-119.
- Di Gennaro, F./B. Barbaro 2008, Territori e paesaggi mediotirrenici nella mente dei protostorici, in N. Negroni Catacchio (ed.), *Preistoria e Protostoria in Etruria. Paesaggi reali e paesaggi mentali. Ricerche e scavi. Atti dell'Ottavo Incontro di Studi. Valentano (Vt) - Pitigliano (Gr)*, 15-17 Settembre 2006, Milano, 117-128.
- Di Gennaro, F./A. Guidi 2000, Il bronzo finale dell'Italia centrale. Considerazioni e prospettive di indagine, in M. Harari/M. Pearce (eds), *Il protovillanoviano al di qua e al di là dell'Appennino. Atti della giornata di studio, Pavia, Collegio Ghislieri, 17, Giugno 1995*, Como, 99-132.
- Di Gennaro, F./A. Guidi 2009, Ragioni e regioni di un cambiamento culturale: modi e tempi della formazione dei centri protourbani nella valle del Tevere e nel Lazio meridionale, *Scienze dell'Antichità* 15, 429-445.
- Di Gennaro, F./R. Peroni 1986, Aspetti regionali dello sviluppo dell'insediamento protostorico nell'Italia centro-meridionale alla luce dei dati archeologici e ambientali, *DialA* 3, 193-200.
- Dicks, T.R.B. 1972, Network Analysis and Historical Geography, *Area* 4(1), 4-9.
- Evans, T. et al. 2008, Modelling Maritime Interaction in the Aegean Bronze Age, *Antiquity* 82, 1009-1024.
- Evans, T. et al. 2009, Using statistical physics to understand relational space. A case study from the mediterranean prehistory, in D. Lane et al., *Complexity Perspectives on Innovation and Social Change*, Berlin, 456-474.
- Fisher, M. 2003, Gis and Network Analysis, in D. Hensher et al., *Handbook 5. Transport Geography and Spatial Systems*, <http://www.sre.wu-wien.ac.at/ersa/ersaconfs/ersa03/cdrom/papers/433.pdf> (14th June 2010).
- Fontaine, P. (ed.) 2010, *L'Etrurie et l'Ombrie avant Rome. Cité et territoire. Actes du colloque international: Louvain-la-Neuve, 13-14 février 2004*, Brussels/Rome.
- Freeman, L.C. 1977, A set of measures of centrality based upon betweenness, *Sociometry* 40, 35-41.
- Fulminante, F. 2003, *Le sepolture principesche nel Latium Vetus fra la fine della prima età del Ferro e l'inizio dell'età Orientalizzante*, Rome.
- Fulminante, F. forthcoming, *Settlement Analysis and Urbanisation in Central Italy (Latium vetus)*, Cambridge.
- Fulminante, F./S. Stoddart 2012, Indigenous Political Dynamics and Identity from a Comparative Perspective: Etruria and Latium vetus, in E. Alberti/S. Sabatini (eds), *Exchange Networks and Local Transformations. Interactions and Local Changes in Europe and the Mediterranean between Bronze and Iron Age*, Oxford.
- Gatrell, A.G. 2005, Complexity theory and geographies of health: a critical assessment, *Social Science & Medicine* 60, 2661-71.
- Gianni, A. 1991, Il Farro, il Cervo ed il villaggio mobile: Economia di sussistenza, insediamento, territorio, tra III e II millennio a.C. nel Lazio meridionale e nella Campania settentrionale, *Scienze dell'Antichità* 5, 99-161.
- Graham, S. 2006a, *EX FIGLINIS: The Network Dynamics of the Tiber Valley Brick Industry in the Hinterland of Rome*, Oxford.
- Graham, S. 2006b, Networks, Agent-based models and the Antonine Itineraries. Implications for Roman Archaeology, *Journal of Mediterranean Archaeology* 19(1), 45-64.
- Graham, S. 2006c, Who's in Charge? Studying Social Networks in the Roman Brick Industry in Central Italy, in C. Mattusch/A. Donohue (eds), *Common Ground: Archaeology, Art, Science, and Humanities - Proceedings of the XVI International Congress of Classical Archaeology*, Oxford, 359-362.
- Graham, S. 2007, Re-Playing History: The Year of the Four Emperors and Civilization IV. Case Study, in *Higher Education Academy Subject Centre for History, Classics and Archaeology, United Kingdom*. <http://www.hca.heacademy.ac.uk/>.
- Graham, S. 2009, The Space Between: The Geography of Social Networks in the Tiber Valley, in F. Coarelli/H.

- Patterson (eds), *Mercator Placidissimus. The Tiber Valley in Antiquity. New research in the upper and middle river valley, Rome 27-28 February 2004*, Rome, 671-686.
- Graham, S./J. Steiner 2006, *Travellersim: Settlements, Territories, and Social Networks*, in *Computer Applications and Quantitative Methods in Archaeology 2006 Conference, Fargo North Dakota*, available at: <http://home.cc.umanitoba.ca/~grahams/Travellersim.html>
- Guaitoli, M. 1981, *Gabii: osservazioni sulle fasi di sviluppo dell'abitato*, *Quaderni dell'Istituto di Topografia Antica dell'Università di Roma* 9, 23-57.
- Guidi, A. 1989, Alcune osservazioni sull'origine delle città etrusche, in G. Maetke (ed), *Atti del II Congresso Internazionale Etrusco (Firenze, 26 Maggio-02 Giugno 1985)*, Rome, 285-292.
- Guidi, A. 2006, The Archaeology of the Early State in Italy, *Social Evolution & History* 6.2, 55-90.
- Hage, P./F. Harary 1991, *Exchange in Oceania*, Oxford.
- Hage, P./F. Harary 1996, *Island networks. Communication, kinship, and classification structures in Oceania*, Cambridge.
- Haggett, P./R.J. Chorley 1969, *Network Analysis in Geography*, London.
- Harary, F. 1969, *Graph theory*, Reading.
- Huisman, M./A.J. Van Duijn 2005, Software for Social Network Analysis, in P.J. Carrington et al., *Models and Methods in Social Network Analysis*, New York, 270-316.
- Hutchinson, P. 1972, Networks and Roman Roads: A Further Roman Network, *Area* 4(4), 279-280.
- Ikegami, E. 2005, *Bonds of Civility. Aesthetic Networks and the Political Origine of Japanese Culture*, Cambridge.
- Irwin-Williams, C. 1977, A network model for the analysis of prehistoric trade, in T. Earle/J. Ericson (eds), *Exchange systems in prehistory*, New York, 141-151.
- Irwin, G.J. 1983, Chieftainship, kula and trade in Massim prehistory, in J. Leach/E. Leach (eds), *The Kula: new perspectives on Massim exchange*, Cambridge, 29-72.
- Isaksen, L. 2008, The application of network analysis to ancient transport geography: A case study of Roman Baetica, *Digital Medievalist*, available at: <http://www.digitalmedievalist.org/journal/4/isaksen/>.
- Jenkins, D. 2001, A Network Analysis of Inka Roads, Administrative Centers, and Storage Facilities, *Ethnohistory* 48, 655-687.
- Johnson, S. 2001, *Emergence: The Connected Lives of Ants, Brains, Cities and Software*, London.
- Kappelhoff, P. 2004, Kompetenzenentwicklung in Netzwerken: Die Sicht der Komplexitäts- und allgemeinen Evolutionstheorie, [http://kappelhoff.wiwi.uni-wuppertal.de/fileadmin/kappelhoff/Downloads/Veroeffentlichungen/komplex\\_2004.pdf](http://kappelhoff.wiwi.uni-wuppertal.de/fileadmin/kappelhoff/Downloads/Veroeffentlichungen/komplex_2004.pdf).
- Knoke, D./S. Yang 2008, *Social Network Analysis* (1st ed. 1982), Los Angeles etc.
- Kossinets, G. 2006, Effects of missing data in social networks, *Social Networks* 28, 247-268.
- Krempel, L. 2008, Netzwerkanalyse. Ein wachsendes Paradigma, in C. Stegbauer (ed.), *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften*, Berlin, 215-226.
- Lang, S. (ed.) 1997, *Kulturelle Identität, soziale Netzwerke und Kognition. Berichte ethnologischer Forschungen aus Köln*, Wiesbaden.
- Langton, J. et al. 1972, Networks and Roman Roads, *Area* 4(2), 137-141.
- Latour, B. 2005, *Reassembling the Social. An Introduction to Actor-Network-Theory*, Oxford.
- Lock, G./J. Pouncett 2007, Network analysis in Archaeology. An Introduction to Network Analysis, in J.T. Clark/E. Hagemeister (eds), *Digital Discovery. Exploring New Frontiers in Human heritage. CAA 2006 Computers Applications and Quantitative Methods in Archaeology*, Budapest, 123-154.
- Mackie, Q. 2001, *Settlement Archaeology in a Fjordland Archipelago. Network Analysis, Social Practice and the Built Environment of Western Vancouver Island, British Columbia, Canada, since 2,000 BP*, Oxford.
- Malkin, I. 2003, Networks and the Emergence of Greek Identity, *Mediterranean Historical Review* 18(2), 56-74.
- Malkin, I. et al. 2009, *Greek and Roman Networks in the Mediterranean*, London.
- Mandolesi, A. 1999, *La prima Tarquinia. L'insediamento protostorico sulla cività e nel territorio circostante*, Florence.
- Masucci, A.P. et al. 2009, Random planar graphs and the London street network, *UCL working papers series* 146 (March 09), <http://www.casa.ucl.ac.uk/publications/workingPaperDetail.asp?ID=146>.
- Mayfair Mei-Hui, Y. 1994, *Gifts, Favors and Banquets: The Art of Social Relationships in China*, New York.
- McLean, P.D. 2007, *The Art of the Network. Strategic Interaction and Patronage in Renaissance Florence*, Durham / London.
- Meijers, E. 2007, From central place to network model. Theory and evidence of a paradigm change, *Tijdschrift voor Economische en Sociale Geographie* 98, 245-259.
- Moore, T. 2007, Perceiving communities: exchange, landscapes and social networks in the later iron age of western Britain, *OxJA* 26(1), 79-102.
- Moreno, J.L. 1934, *Who shall survive?*, Washington DC.
- Müller-Prothmann, T. 2006, *Leveraging Knowledge Communication for Innovation. Framework, Methods and Applications of Social Network analysis in Research and Development*, Frankfurt a.M. etc.
- Müller, U. 2009, Netzwerkanalyse in der historischen Archäologie. Begriffe und Beispiele, in S. Brather et al., *Historia Archeologica. Festschrift für Heiko Steuer zum 70. Geburtstag*, Berlin/New York, 735-754.
- Newman, M. et al. 2006, *The Structure and Dynamics of Networks*, Princeton.
- Nijboer, A.J. 2005, La cronologia assoluta dell'età del Ferro nel Mediterraneo, dibattito sui metodi e sui risultati, in G. Bartoloni/F. Delpino (eds), *Oriente e Occidente: Metodi e discipline a confronto. Riflessioni sulla cronologia dell'età del Ferro in Italia (Atti dell'Incontro di Studi, Roma, 30-31 ottobre, 2003)* (= *Mediterranea* 1), Pisa/Rome, 527-556.
- Nuninger, L. 2002, *Peuplement et Territoires protohistoriques du VIIIe au Ier siècle avant J.-C. en Languedoc oriental (Gard-Hérault)*, Besançon.
- Nuninger, L. 2003, Questions of protohistoric territorial heritage through the settlement system during the Iron Age: a case study from the eastern Languedoc (France), in M. Doerr/A. Sarris (eds), *The Digital Heritage of Archaeology. Proceedings of the 29th CAA conference held at Heraklion, Crete, Greece, April 2002*, Heraklion, 285-290.
- Okabe, A. et al. 2006, SANET: A toolbox for spatial analysis on a network, *Geographical Analysis* 38(1), 57-66.
- Orsen Jr., C.E. 2005, Network Theory and the Archaeology of Modern History, in P. Funari et al. *Global Archaeological Theory. Contextual Voices and Contemporary Thoughts*, New York etc., 77-95.
- Pacciarelli, M. 1994, *Sviluppi verso l'urbanizzazione nell'Italia tirrenica protostorica*, in P. Gastaldi/G. Maetke (eds), *La presenza etrusca in Campania Meridionale. Atti delle giornate di studio, Salerno-Pontecagnano, 16-18 Novembre 1990*, Florence, 227-253.
- Pacciarelli, M. 2001, *Dal villaggio alla città. La svolta proto-urbana del 1000 a.C. nell'Italia tirrenica*, Florence.



- Pacciarelli, M. 2005, 14C e correlazioni con le dendrodate nordalpine: elementi per una cronologia assoluta del Bronzo finale 3 e del primo Ferro dell'Italia peninsulare, in G. Bartoloni/F. Delpino (eds), *Oriente e Occidente: Metodi e discipline a confronto. Riflessioni sulla cronologia dell'età del Ferro in Italia (Atti dell'Incontro di Studi, Roma, 30-31 ottobre, 2003)* (= *Mediterranea* 1), Pisa/Rome, 81-90.
- Padgett, J.F. 2001, Organizational Genesis, identity and Control: The Transformation of banking in Renaissance Florence, in A. Casella/J. Rauch (eds), *Networks and Markets*, New York, 211-257.
- Padgett, J.F./C.K. Ansell 1993, Robust action and the rise of the Medici, 1400-1434, *American Journal of Sociology* 98, 1259-1319.
- Peroni, R. 1989, *Protostoria dell'Italia continentale. La penisola Italiana nelle età del Bronzo e del Ferro* (Popoli e civiltà dell'Italia antica 9), Rome.
- Peroni, R. 1994, *Introduzione alla protostoria Italiana*, Rome/Bari.
- Peroni, R. 1996, *L'Italia alle soglie della storia*, Bari.
- Peroni, R., 2000. Formazione e sviluppi dei centri protourbani medio-tirrenici, in A. Carandini/R. Cappelli (eds), *Roma, Romolo, Remo e la fondazione della città* (exhibition catalogue), Milan, 26-30.
- Pitts, F.R. 1965, A Graph Theoretic Approach to Historical Geography, *The Professional Geographer* 17.5, 15-20.
- Pitts, F.R. 1978-1979, The Medieval River Trade Network of Russia Revisited, *Social Networks* 1, 285-292.
- Rajala, U. 1999, GIS in the analysis of the settlement patterns in central Italy. The possibilities and problems in studying south-east Etruria, in R.F. Docter/E.M. Moormann (eds), *Classical Archaeology towards the Third Millennium. Reflections and Perspectives. Proceedings of the XVth International Congress of Classical Archaeology, Amsterdam, July 12-17, Amsterdam*, 310-313.
- Rendeli, M. (ed.) 2009, *Ceramica, abitati, territorio nella bassa valle del Tevere e Latium vetus*, Rome.
- Rihll, T.E./A.G. Wilson 1991, Modelling settlement structures in ancient Greece: new approaches to the polis, in J. Rich/A. Wallace-Hadrill (eds), *City and Country in the Ancient World*, London/New York, 59-95.
- Rothman, M.S. 1987, Graph Theory and the Interpretation of Regional Survey Data, *Paleorient* 13.2, 73-91.
- Ruffini, G. 2008, *Social Networks in Byzantine Egypt*, Cambridge.
- Sabidussi, G. 1966, The centrality index of a graph, *Psychometrika* 31, 581-603.
- Santley, R.S. 1991, The structure of the Aztec transport network, in C.D. Trombold (ed.) *Ancient road networks and settlement hierarchies in the New World*, Cambridge, 198-210.
- Schnettler, S. 2009, A structured overview of 50 years of small-world research, *Social Networks* 31.3, 165-78.
- Schweizer, T. 1996a, Actor and event orderings across time: Lattice representation and Boolean analysis of political disputes in Chen Village, China, *Social Networks* 18, 247-266.
- Schweizer, T. 1996b, Reconsidering Social Networks: Reciprocal Gift Exchange Among the !Kung, *Journal of Quantitative Anthropology* 6, 147-170.
- Scott, J. 2000, *Social Network Analysis: A Handbook*, 2<sup>nd</sup> Edition, Thousand Oaks.
- Shaw, D.G. 2005, Social networks and the foundation of oligarchy in medieval towns, *Urban History* 32.2, 200-222.
- Sindbaek, S.M. 2007a, Networks and nodal points. The emergence of towns in Early Viking Age Scandinavia, *Antiquity* 81, 119-132.
- Sindbaek, S.M. 2007b, The Small World of the Vikings: Networks in Early Medieval Communication and Exchange, *Norwegian Archaeological Review* 40, 59-74.
- Smith, C. 1996, *Early Rome and Latium. Economy and Society c.1000 to 500 B.C.*, Oxford.
- Smith, C. 2005a, The beginning of Urbanization in Rome, in R. Osborne/B. Cunliffe (eds), *Mediterranean Urbanization (800-600 B.C.)*, Oxford, 91-112.
- Smith, L.M. 2005b, Network, Territories, and the Cartography of Ancient States, *Annals of the Association of American Geographers* 95.4, 832-49.
- Stegbauer, C. 2008, Netzwerkanalyse und Netzwerktheorie. Einige Anmerkungen zu einem neuen Paradigma, in C. Stegbauer (ed), *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften*, Berlin, 11-19.
- Stoddart, S.K./N. Spivey 1990, *Etruscan Italy. An Archaeological History*, London.
- Stöger, H. 2008, Roman Ostia: Space Syntax and the Domestication of Space, in A. Posluschny et al., *Layers of Perception. Proceedings of the 35th International Conference on Computer Applications and Quantitative Methods in Archaeology (CAA), Berlin, Germany, April 2-6, 2007*, Bonn, 322-327.
- Ter Wal, A.L.J./R.A. Boschma 2009, Applying social network analysis in economic geography: theoretical and methodological issues, *The Annals of Regional Science* 43, 739-756.
- Torelli, M. 2000, The Etruscan City-State, in M.H. Hansen (ed), *A Comparative Study of Thirty City-State Cultures*, Copenhagen, 189-208.
- Travers, J./S. Milgram 1969, An experimental study of the small world problem, *Sociometry* 32, 425-443.
- Vanzetti, A. 2004, Risultati e problemi di alcune attuali prospettive di studio della centralizzazione e urbanizzazione di fase protostorica in Italia, in P. Attema (ed.), *Centralization, Early Urbanization and Colonization in First Millennium BC Greece and Italy. Part 1: Italy*. (BABesch Supplementa 9), Leuven, 1-28.
- Walter, A. 2004, *Netzwerkökonomie und Kultur. Sozio-kulturelle Bedingungen innovativer Netzwerke. Eine empirische Untersuchung im "Dritten Italien"*, Bremen.
- Wasserman, S./K. Faust 2007, *Social Network Analysis. Methods and Application*, 2<sup>nd</sup> Edition, Cambridge.
- Watts, D.J. 2003, *Six Degrees. The Science of a Connected Age*, New York, NY.
- White, D.R. 2003, Social Scaling: From scale-free to stretched exponential models for scalar stress, hierarchy, levels and units in human and technological network and evolution, in <http://eclectic.ss.uci.edu/~drwhite/pub/1982scalingDRW.pdf>.
- White, D.R./S.P. Borgatti 1994, Betweenness centrality measures for directed graphs, *Social Networks* 16, 335-346.
- Wilkins, J.B. 1991, Power and idea networks: theoretical notes on urbanisation in the early mediterranean and Italy, in E. Herring et al., *Papers of the Fourth Conference of Italian Archaeology* 1, London, 221-230.

MCDONALD INSTITUTE FOR ARCHAEOLOGICAL RESEARCH, DEPARTMENT OF ARCHAEOLOGY AND ANTHROPOLOGY, UNIVERSITY OF CAMBRIDGE, DIVISION OF ARCHAEOLOGY  
DOWNING STREET, CAMBRIDGE, CB2 3DZ UK  
FF234@cam.ac.uk

# Three ladies from Crustumerium, ca 675-650 BC

Albert J. Nijboer and Sarah L. Willemsen

## Abstract\*

Since 2006, the Groningen Institute of Archaeology (GIA) has been involved in the excavation of the Monte Del Bufalo necropolis at Crustumerium. The investigation yielded tens of tombs dating to the 7<sup>th</sup> and 6<sup>th</sup> centuries.<sup>1</sup> The excavations took place in close collaboration with the SSBAR (Soprintendenza Speciale per i Beni Archeologici di Roma). The article discusses three female tombs that stand out when compared to other contemporary tombs at Crustumerium. In addition, these three tombs have much in common in content and location. This article contains a description of the funerary ritual of each tomb and subsequently will elaborate on the social status of the women, expressed in the artefacts with which they were interred. We will suggest identifying the women buried in tombs 71, 76 and 232, as mistresses of a main household in Crustumerium.

## INTRODUCTION

Crustumerium is one of the northernmost settlements of *Latium Vetus*, located along the Via Salaria, on the eastern bank of the Tiber and at a distance of 15 km from the centre of Rome (fig. 1). The ancient town was positioned on the border of four culturally diverse regions, *Latium Vetus*, the Sabine area, Etruria and the Faliscan-Capenate region. As a result of this location, the material culture of Crustumerium shows signs of hybridity.<sup>2</sup> Its location, the surrounding fertile agricultural land, as well as the interregional road network that placed the site in close contact with the above-mentioned regions, contributed significantly to the development of the site from the 9<sup>th</sup> century onwards. By the 7<sup>th</sup>-6<sup>th</sup> centuries the settlement occupied an area of ca 60 hectares and had become the centre of a small city-state.<sup>3</sup> Crustumerium flourished in the Orientalising and Archaic period, roughly from the second half of the 8<sup>th</sup> until the 6<sup>th</sup> century and must have housed a considerable population (see below). Ancient sources mention that Crustumerium and its hinterland were added in 495 to the rising Roman state as the first *tribus rustica* named after its territory, following an invasion of the Romans in 499.<sup>4</sup>

The SSBAR has investigated the site since the late 1980s, focussing mainly on the excavation of its burial grounds. So far, four necropolises have been identified around the settlement: Monte Del Bufalo (MDB), Sasso Bianco, Marcigliana and Cisterna Grande.<sup>5</sup> Based on the surveys and excavations of the past decades, it can be assumed that thousands of tombs surrounded the settlement, dating predominantly to the period ca 800 to 500. This guesstimate is established on research

both in the Monte Del Bufalo necropolis and in the settlement.<sup>6</sup>

Up to now, around 400 tombs have been excavated by both the SSBAR and other partners involved in the Crustumerium project.<sup>7</sup> The Monte Del Bufalo necropolis stretches along the south-eastern side of the settlement (fig. 2). Based on surveys of the SSBAR, we can assume that the density of tombs in this necropolis is uneven. The southern part of the Monte del Bufalo necropolis contains hundreds of tombs of which ca 250 were excavated, including the three tombs presented in this paper (fig. 2).<sup>8</sup>

With respect to the grave contents, we differentiate between the drinking and eating wares (often found next to the deceased or in a separate niche of the tomb) and the personal objects, deposited on top of or near the remains of the body. Almost all tombs contain artefacts that refer to a drinking and eating ritual associated with the burial. This coincides with data from other burial grounds in the vicinity of Rome, suggesting that this ritual constitutes the most traditional and characteristic aspect of the funerary ceremony during the period discussed.<sup>9</sup> In addition to these eating and drinking wares, tombs assigned to roughly the period 800 to 650/600 contain a number of personal artefacts, some of them unparalleled. In the literature, a few artefacts are considered status symbols, providing a possibility to reconstruct the social persona of the deceased, a topic that will be discussed in the final part of this paper.<sup>10</sup>

Research of the burial grounds around Crustumerium is affected by two biases. The first concerns the considerable damage brought to the tombs by robbers. They are mainly interested in

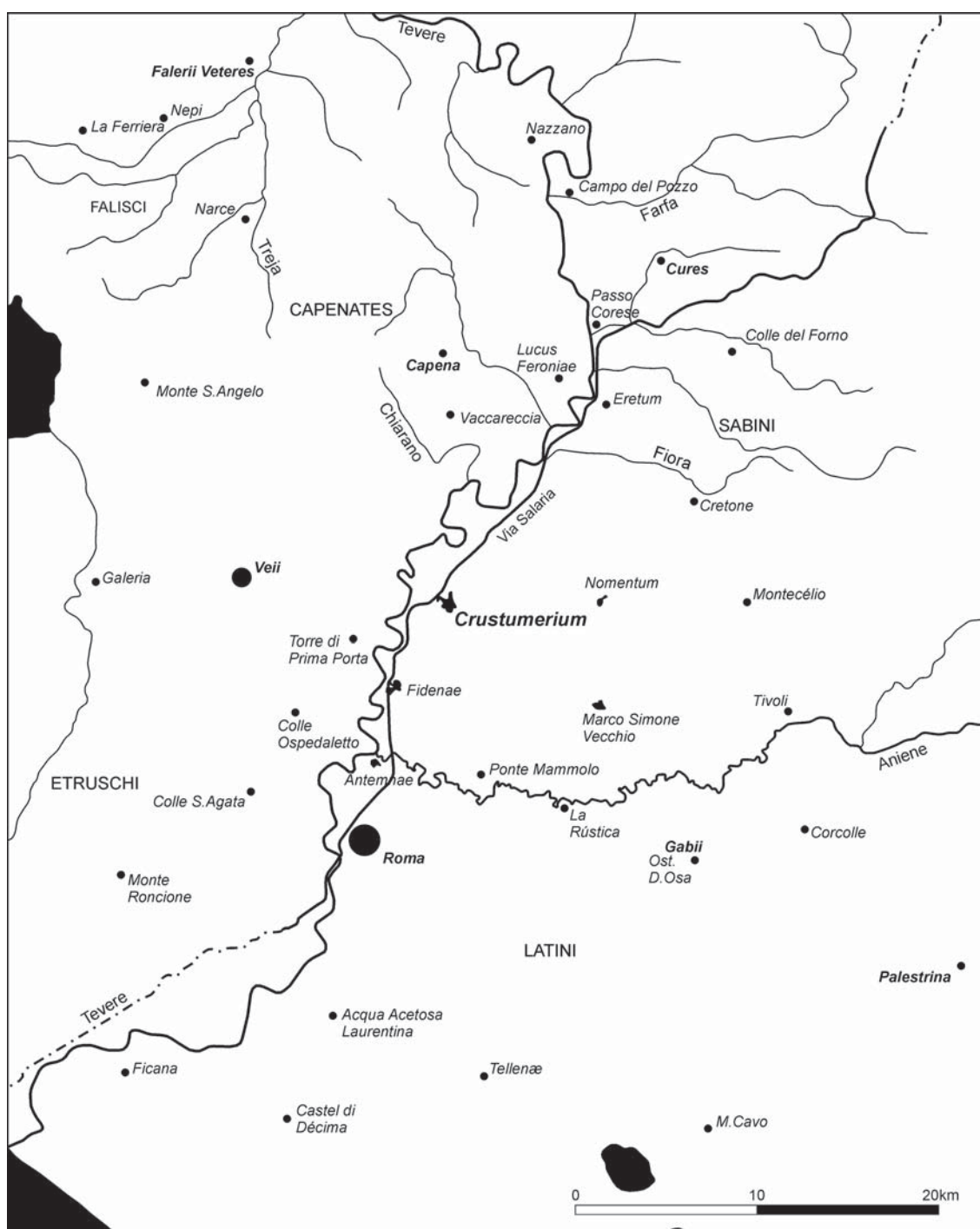


Fig. 1. Crustumerium and surrounding territories.

the ceramics representing the customary drinking and eating wares, often deposited at the head end of the tomb. The personal ornaments, frequently made of bronze, are apparently not as highly

wanted since their poor state of preservation would require a large investment in time and money for restoration. The depositions with the personal ornaments placed on top, have therefore





Fig. 2. The settlement of Crustumerium (in black outline) and the Monte Del Bufalo funerary area (in grey).

often remained undamaged and can still be excavated, whereas the ceramic assemblage in many cases has been largely robbed as in the three tombs presented here.

The second bias concerns the deep ploughing during the past century that altered the ancient landscape to some extent and destroyed and damaged a large amount of tombs.

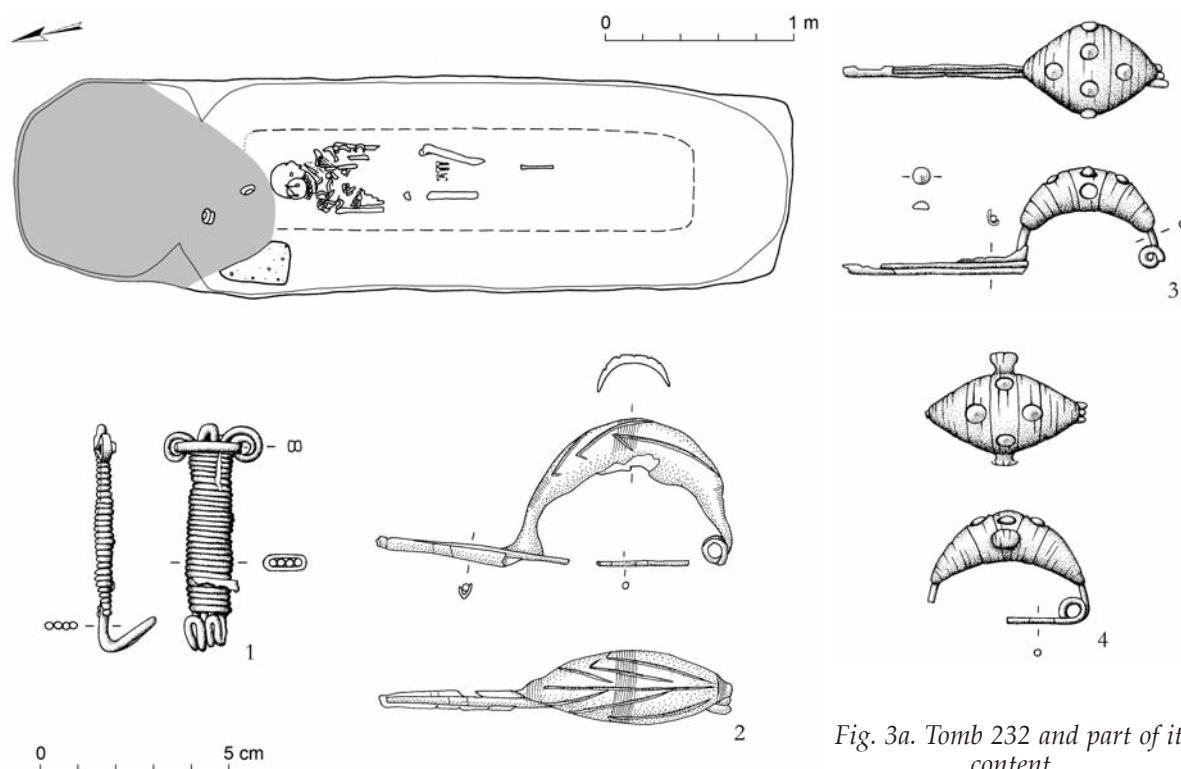


Fig. 3a. Tomb 232 and part of its content.

At present we describe three tombs, located close to each other, that, according to Crustumarium standards, contained a high number of personal objects. It concerns Monte Del Bufalo tombs 71, 76 and 232 dating to the period 675-650.<sup>11</sup>

We start with a presentation of the three tombs followed by a discussion of the possibilities to reconstruct the social position of the women, buried in these tombs.

#### TOMB 232

Tomb 232 was excavated in July 2007. It is a rectangular *fossa* tomb with a niche at the head end (*fossa con loculo*). It contained the skeleton of a woman aged 40 to 50 years (fig. 3a).<sup>12</sup> The tomb had been severely abraded as the result of ploughing and damaged due to illicit excavation, leaving little of the original funerary assemblage in the head niche, which had probably been closed off with one or more, smaller and larger tuff blocks. In the eroded and pillaged *loculus* we excavated the lower part of a *holmos* (stand) and fragments of 5 small cups with high handles (*taz-zine-attingitoio*, fig. 3b; 8), which were used to ladle a drink, probably wine, from a larger container, often a bowl or jar.<sup>13</sup> To date, the *holmos* of tomb 232 is the only one excavated at Crustumarium

(fig. 3b; 7). It was made of *impasto rosso* and embellished with decorations in white slip in white-on-red technique.<sup>14</sup> In central Italy, comparable *holmoi* have been found in tombs with an elaborate furnishing and are considered to be indicative of high-status female burials.<sup>15</sup>

The social status of the woman is furthermore reflected in the personal gifts, which were intact and predominantly made of copper-alloy, being:

- a headdress<sup>16</sup> (fig. 3b; 5)
- a string of 39 miniature pendants (1.0 cm in height) with small cylinders (0.5 cm width) in between
- a clasp consisting of three elements (fig. 3a; 1)
- 6 fibulae a navicella (fig. 3a; 2)
- 1 fibula with bow adorned with ivory discs and circular, amber inlays (fig. 3a; 3)
- 1 fibula with bow adorned with ivory discs, lateral knobs and circular, amber inlays (fig. 3a; 4) and
- a bar with the schematic representation of a monkey on one side (fig. 3b; 6).

Since it is difficult to find an exact parallel for several of these artefacts, we think that this is an exceptional tomb.<sup>17</sup> For example, the delicate string of small copper-alloy pendants and cylinders is about 26 cm long and weighs less than 16 to 17 grams. It was found underneath the mandible of





*Fig. 3b. Part of the content of Tomb 232.*

the deceased. Since we have no parallel for this string with pendants, we can only hypothesize upon its function. It might have been either a necklace, a string somehow associated with textiles, possibly a veil, or the string with pendants was worn from ear to ear for a decorative or yet unknown function.<sup>18</sup>

We could neither find an exact parallel for the fibulae consisting of ivory discs with small amber inlays. The form of one of them is comparable to two bronze fibulae also embellished with amber dots found at Osteria dell'Osa tombs 116 and 224, both elaborately furnished.<sup>19</sup>



Fig. 4. Tomb 76 and part of its content.

## TOMB 76

Tomb 76 is a rectangular *fossa* tomb with a niche at the head end. The body of the deceased was probably placed in a wooden sarcophagus in a recess underneath a row of large, horizontal, cover slabs that rested on two lateral ridges (fig. 4).<sup>20</sup> The tomb contained the skeleton of a female, between 40 to 50 years old, with a height of ca 160 cm.

The head *loculus* of this tomb had been robbed but we were able to reconstruct an *impasto rosso* olla with stamped decoration (fig. 4; 1) and a carenated bowl (fig. 4; 2). Both objects refer to a drinking ritual. The tomb is closely correlated to tomb 232. This is mainly reflected in the intact personal *corredo* (predominantly made of copper-alloy) consisting of:

- an artefact similar to, though smaller than, the headdress of tomb 232 mentioned above (fig. 4; 5)
- 3 fibulae *a navicella* (fig. 4; 8, 9, 10)
- 4 fibulae *a sanguisuga* (fig. 4; 4, 11, 12)
- a small bronze ring
- a spindle whorl (fig. 4; 3)
- a clasp (one element) (fig. 4; 13)
- a ring of twisted rod with a diameter of 9 cm, found near the feet
- 2 bracelets and (fig. 4; 6, 14)
- a large suspension ring with a diameter of ca 28 cm (fig. 4; 7).

The artefact that is similar to the headdress of tomb 232 was not found on top of the head (as was the case in tomb 232) but on the breast of the deceased. The manufacture of both artefacts is identical and points to an originally, similar function. The lobes are pierced in the middle and must have fastened an organic material, probably some sort of textile, as was the case for the headdress of tomb 232.

Suspension rings have recently been studied in detail by Iaia. Rings comparable to the one in tomb 76, are typical for *Latium Vetus*, but have also been found in Capena, some Sabine sites and in Caere. Smaller suspension rings emerge during the 9th century while their typological evolution can be followed till the 7th century. The large, flat suspension rings with an elaborate incised and impressed decoration, such as the ones in tombs 76 and 71 (see below), pertain to Latial Period IVA. By that time, they occur mainly in 'rich female tombs in *Latium Vetus*'<sup>21</sup> and are considered as markers of status for a ruling elite.<sup>22</sup>

## TOMB 71

Tomb 71 consists of a shaft with a separate lateral niche (*loculus*) at the bottom, containing the body of the deceased, closed off by a row of standing, closing stones and a head niche, containing part of the *corredo*, closed off with one slab.<sup>23</sup> The grave type is called *tomba a loculo tipo Narce*.<sup>24</sup> This tomb type emerges at Crustumerium around 700 and is also found at Veii.<sup>25</sup> Tomb 71 was heavily looted and even the personal ornaments, usually deposited on top of the deceased, were largely robbed. However, conscientious excavation, documentation and restoration, provided enough information to attribute a high importance to this tomb, comparable to that of the two presented above (fig. 5a).

The artefacts that pertain to the drinking and eating wares in this tomb are:

- an *impasto rosso olla a coppette* (jar with four bowls attached to the shoulder) (fig. 5b; 5)
- a bronze bowl with pearl rim, probably with tripod legs (fig. 5b; 4)<sup>26</sup>
- a bronze kyathos (fig. 5a; 1)<sup>27</sup>
- at least 13 *impasto tazzine-attingitoio* (small cups with a raised handle) (fig. 5a; 3)
- at least 5 *impasto tazze* (bowls) (fig. 5a; 2)
- three *impasto amphorae* and
- an oinochoe of depurated clay (fragmentary)

The personal objects that must originally have been related to the remains of the deceased, prior to the extensive robbing of tomb 71, are:

- fragments of an iron fibula
- an iron knife
- two small rings
- a glass bead
- fragments of a large suspension ring with an original diameter of ca 27 cm.<sup>28</sup>

The large suspension ring indicates that we are dealing with a woman of some standing (see comments above on tomb 76). The iron knife might point to a woman as mistress of a household.<sup>29</sup> An elevated social position is also reflected in the *olla a coppette* and the two remaining bronze vessels. Based on the large number of preserved ceramic bowls, we assume that the tomb originally contained an elaborate banqueting set. The wealth of the *corredo* in the head niche might have inspired the tomb robbers to excavate not only the head niche, but also the lateral *loculus* with remains of the deceased, causing considerable damage to the deposition and its personal ornaments.

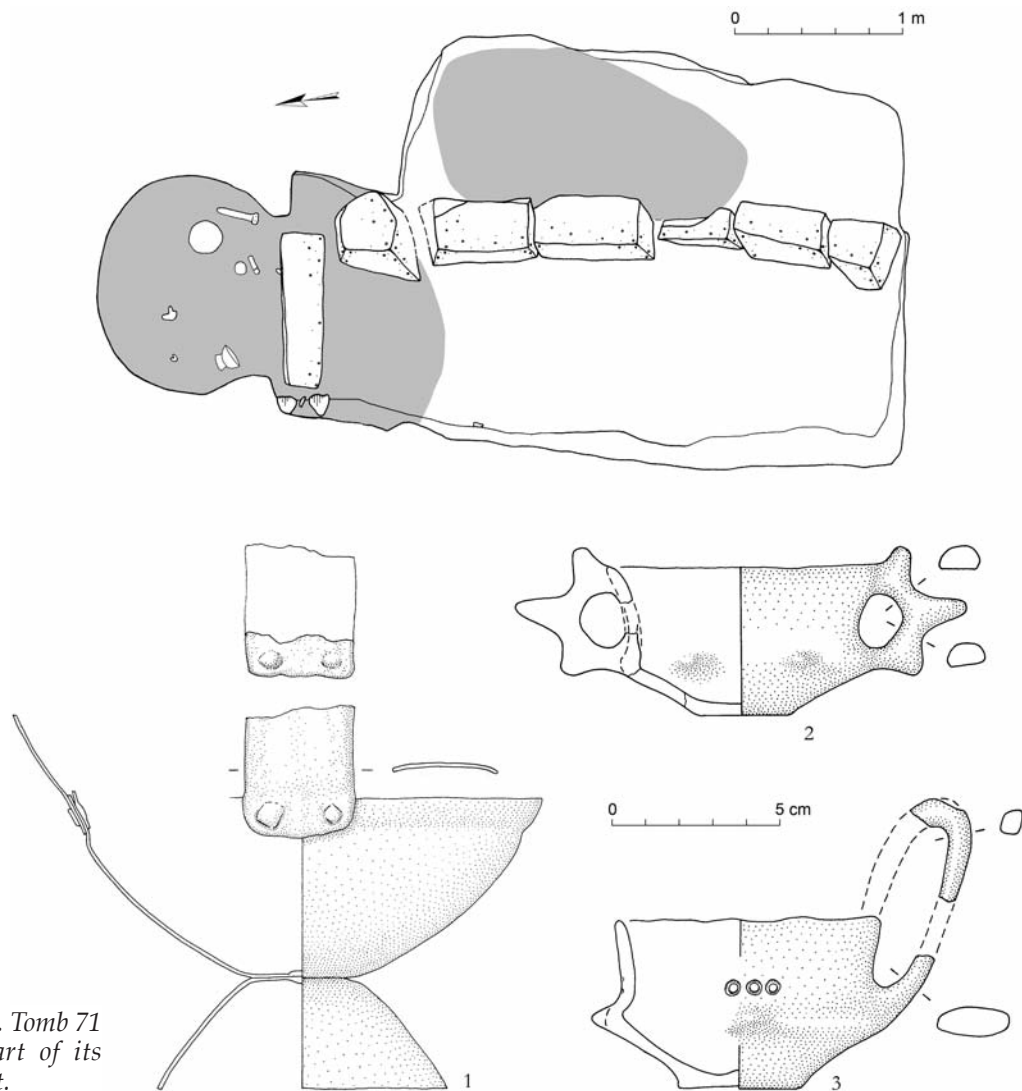


Fig. 5a. Tomb 71 and part of its content.

#### STATUS MARKERS AND SOCIAL RECONSTRUCTION

For a reconstruction of the social status of the three buried women presented above, it is essential to examine demographics as well as social ordering in the main centres of central Italy around 700-650.

We need to impart an idea on the whole population living at Crustumerium in order to come to some ideas regarding who had access to formal burial and who did not. Di Gennaro and Togni-nelli gave a rough estimate of 6000 inhabitants for the settlement during the 7<sup>th</sup> and 6<sup>th</sup> centuries resulting in an average of 100 people per hectare.<sup>30</sup> Although a population density at Crustumerium during the 7<sup>th</sup> and 6<sup>th</sup> century of 100 people per hectare might be too high for the predominantly

agricultural community at hand, it is safe to assume that thousands of people lived on the settlement plateau.<sup>31</sup> This view is supported by results from systematic surveys of the settlement area demonstrating dense habitation.<sup>32</sup> The infrastructure of roads, the monumental defence works, as well as the level of craft-specialisation achieved that documents the existence of several workshops at the site, also supports the statement that Crustumerium, as a centre, housed thousands of people. A mean of 50 inhabitants per hectare still provides us with an average of 3000 inhabitants for Crustumerium during the 7<sup>th</sup> and 6<sup>th</sup> centuries. If these were all interred in the various burial grounds surrounding the settlement, this would result in tens of thousands of tombs taking into account an average age of around 30.<sup>33</sup>



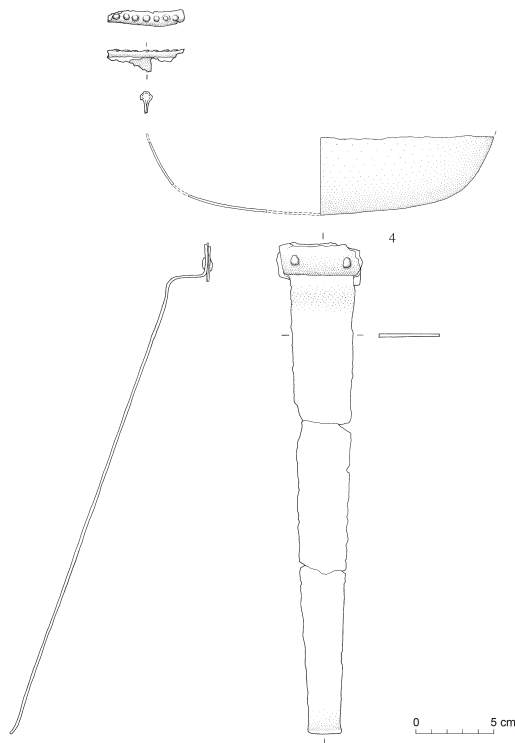


Fig. 5b. Part of the content of Tomb 71.

This massive number of tombs is unlikely. We estimate that thousands of tombs surrounded the settlement of Crustumerium but not tens of thousands. So far the excavations of the SSBAR and others have revealed hundreds of tombs, clus-

tered in several (distinct) groups. Surveys and trenches excavated by the SSBAR in the Monte Del Bufalo necropolis indicate that there are areas with a high concentration of tombs and areas that were less intensively used for interment. We know that the proportion of the population found in the burial grounds is not representative. Selection took place according to gender and age categories. Probably some status groups were excluded as well. For example, infants and children are largely missing in the burial record. Taking into account that up to 50% of all children did not reach the age of 5, child depositions would have constituted a considerable proportion of the tombs if they all received a funeral in tombs.<sup>34</sup> In addition, the quantity of early 8<sup>th</sup> century tombs at Crustumerium is so far limited, making it probable that only a very restricted group of people were buried. Moreover, during the period 700 to 650, male tombs are underrepresented considerably at Crustumerium.<sup>35</sup> Possibly between 50 to 75 percent of the population was not deposited in tombs throughout the 7<sup>th</sup> and 6<sup>th</sup> centuries.<sup>36</sup> This guesstimate takes into account that many children would have died in their infancy and the vast majority of them were not buried in tombs. Also the proportion of men is significantly less than expected. Moreover it seems that the lower classes were not fully represented in the burial record but this requires additional research. Other groups might have been excluded as well though it is evident from the funerary record of central Italy that the upper echelons of society, and those who strove to be, were formally interred. The above-mentioned demographic approximation demonstrates that only part of the population at Crustumerium is formally buried in tombs.

As has been described above, some of the artefacts found in Monte Del Bufalo tombs 71, 76 and 232, are typical for well-furnished tombs in the area surrounding Crustumerium. A social reconstruction of the roles assigned to these three women, requires a general introduction into the funerary record of central Italy. Since the 19<sup>th</sup> century AD, the affluent, so-called warrior tombs and the succeeding *tombe principesche* roused the imagination of many people.<sup>37</sup> There is a long tradition in Italian archaeology to assign a high status to those 8<sup>th</sup> and 7<sup>th</sup> century tombs that contain a 'rich' or elaborate *corredo*. We consider this tradition sound mainly on account of the symbolic value of some of the artefacts found in such tombs. Nonetheless we would like to stress that we consider status differentiation only possible for those tombs with a personal *corredo* or other fea-



tures that can tell us something about the person deposited in the grave. It might not be possible for most tombs to rank them according to status.

Some status markers were in use for centuries. We refer to artefacts like the *lituus*, double axe, sceptre, *bullae*, purple toga, *fascia*, throne, folding chair and golden diadem.<sup>38</sup> One can add a number of other status markers such as chariots, fans, footstools of Ceri type, silver/gold jewellery and silver/gold drinking vessels, which are occasionally found in the richest tombs pertaining to the 8<sup>th</sup> and 7<sup>th</sup> centuries. Thus we also consider this tradition sound based on the durability of some status markers kept in use for centuries. For example, the chariot and double shield can be traced back to the 10<sup>th</sup> century in the area around Rome.<sup>39</sup> So far, such status markers have not been recovered at Crustumerium.

We differentiate between four levels of funerals for the period 700-650:

- the highest level associated with warrior tombs and *tombe principesche*,
- the second level is illustrated by the female depositions presented above,
- a third level consisting of tombs with a relatively modest funerary assemblage (see below),
- and a fourth level represented by those people that were not buried in tombs (see above); this level does not consist of one group per community but reflects local selections in gender, age groups and possibly in social standing.

The highest level during the 8<sup>th</sup> century, consisting of warrior tombs, is mainly found in Etruria, while in *Latium Vetus* during this period, status appears to be predominantly expressed in female tombs.<sup>40</sup> *Tombe principesche* (male and female) are rare and occur both in Etruria and *Latium Vetus* mainly during the period 725-650.<sup>41</sup>

To date none of the tombs at Crustumerium can be labelled a warrior tomb or a *tomba principesca* since the opulence associated with such tombs is lacking.<sup>42</sup> Besides the two biases introduced above, this void at Crustumerium in the category of wealthiest tombs in central Italy, can be due to a number of other factors such as:

- the relatively small dataset, especially in comparison to other sites such as Veii, Caere and Tarquinia where thousands of tombs have been excavated,
- specific local conditions that prevented political centralisation and the rise of a '*Primus*' (see below),
- local ideological restrictions leading to a less elaborate *corredo* or to an under-representation of certain groups in the funerary record or

- a relative poverty of the site when compared to other sites in Etruria and *Latium Vetus* south of the Aniene.

Many of the above mentioned factors can only be studied when more tombs at Crustumerium have been published.<sup>43</sup>

The rating of tombs in groups based on a weighing of their *corredo*, is common practice.<sup>44</sup> As mentioned above, the highest social level, the warrior tombs (male) and *tombe principesche* (male and female), has so far not been found at Crustumerium.

The subsequent level, consisting of tombs with a less costly but still extensive *corredo*, is well represented at the site. This is partially caused by temporal differences in the funerary ritual, resulting in growing numbers of 'wealthier' tombs during the period 725-650.

A third level of female tombs with a less elaborate *corredo* containing only a few personal ornaments, pertaining to the period 700-650, consists of tombs like Sasso Bianco tomb 34<sup>45</sup> and Monte Del Bufalo tomb 223.<sup>46</sup>

Level four consists of population groups that are underrepresented in the tombs around Crustumerium. This refers to a proportion of men and the majority of infants and children.<sup>47</sup> The hypothesis that the 'lower' class might hardly have been buried in tombs, during the period 700 to 650, requires further elaboration and testing. It calls for a better perception of the funerary ritual of the 'lower' class, a topic that will be examined elsewhere.<sup>48</sup>

In addition, a reconstruction of the social status of the women buried in the three tombs requires an understanding of all tombs so far excavated at Crustumerium and a clear notion of the social conditions at the site around 700-650. Social indexing needs large datasets of tombs that are presently not available for Crustumerium. Yet, we construe that the women buried in tombs 71, 76 and 232 will have formed part of the upper echelons of the community on account of the following, distinctive artefacts that accompanied their burial:

- a headdress (only two of this type are known; one functioning as a headdress in tomb 232 while the other was placed on the shoulder of the woman in tomb 76),
- a *holmos* (so far only one *holmos* has been recovered at Crustumerium in the tombs),
- suspension rings (in tombs 71 and 76),
- an *olla a coppette* of tomb 71 (similar jars occur occasionally in other tombs at Crustumerium as well),<sup>49</sup>
- two bronze vessels of tomb 71, a tripod-bowl

and a rare bronze *kyathos*,

- the quantity of fibulae and other ornaments (tombs 76 and 232),
- the exceptional, ivory fibulae (tomb 232), and
- the unparalleled artefacts without an obvious function (in tomb 232 the string of tiny pendants and the bar with monkey finial).

These artefacts are unique or uncommon at Crustumerium and will obtain a high value in any social indexing method.<sup>50</sup>

Regarding the social structure at Crustumerium around 700-650, we can look at nearby centres for which larger, funerary datasets are available, such as Osteria dell'Osa and Veii.<sup>51</sup> From the study of these burial grounds, scholars have concluded that, from the 8<sup>th</sup> century onwards, communities were organised in clans, each dominated by a prominent family.<sup>52</sup> This system can be labelled patrician.<sup>53</sup> The *patres*, presented here as the heads of the local clans, would have facilitated and controlled the activities of their dependants or clients to some extent. In a recent study, De Santis proposed the principle of *primus inter pares* for Veii, suggesting that political centralisation had led to a social structure in which the *patres* elected a figurehead, a *primus*, who himself did not have to be a patrician.<sup>54</sup> This procedure reflects some sort of political unification of the various factions living in the primary centres of Italy during the 8<sup>th</sup> and 7<sup>th</sup> centuries. At Veii, the tombs of the *primi* have been identified in four remarkable 8<sup>th</sup> century warrior tombs. It is uncertain to what extent this system of *primus inter pares* existed at Crustumerium, but the presence of a footstool of Ceri type covered in bronze-sheet in Monte Del Bufalo tomb 40, indicates that some of the symbols of power associated with a *primus*, were employed here as well.<sup>55</sup>

On account of the *corredo*, Bartoloni differentiates between various female roles in Etruria and *Latium Vetus* during the 8<sup>th</sup> and 7<sup>th</sup> century.<sup>56</sup> She recognizes sometimes overlapping social positions such as 'women with power', weaver, mistress of a household and wife/mother. Women with power, for example, are buried with status indicators such as thrones, chariots and sceptres. Her group '*padrone di casa*' is characterized by bronze vessels, some other bronze artefacts and ornaments, knives, stands and elaborate drinking and eating wares related to a banqueting tradition. The three female tombs examined in this paper do not represent the highest social level of *tombe principesche* or Bartoloni's group 'women with power'. However they do pertain to the broader group of elite graves, Bartoloni's *padrone*

*di casa*. On account of the *corredo* and location of tombs 71, 76 and 232, we suggest identifying the women buried in them, as mistresses of a main household in Crustumerium.<sup>57</sup> As such they are considered the female counterparts of the male *padroni* or *patres*.<sup>58</sup>

A final topic addressed, is the location of tombs 71, 76 and 232. As has been stated above, the three tombs are found quite near each other, in the Monte Del Bufalo necropolis. This necropolis occupies an area of about 1.5 hectares and consists of a few hundred tombs of which ca 250 tombs were excavated covering the period 800 to 550. A formal, spatial analysis of the MDB necropolis at Crustumerium can only be executed in collaboration with the SSBAR and is scheduled for the near future. It is likely that this large group of hundreds of tombs can be divided into smaller clusters but this cannot be examined in detail at this stage.<sup>59</sup> Nonetheless, some preliminary remarks can be made. The necropolis appears to miss a clear chronological ordering, meaning that the location of the tombs is apparently not dictated by time or generation.<sup>60</sup> For example, just to the South of tomb 232, dating around 675-650, we excavated an intact chamber tomb dating around 600 that contained the remains of 5 burials.<sup>61</sup> Thus the neighbouring tombs 232 and 222 are separated in time by two to three generations. It seems that over a period of 250 years, tombs have been dug in the tuff creating a close packing of graves in this part of the necropolis. Clustering within the Monte Del Bufalo necropolis does not seem to be similar to that of other burial grounds in central Italy where younger tombs concentrate around a few older tombs.<sup>62</sup> In the MDB necropolis, most of the oldest tombs, dating around 800, are closely grouped. The location and contents of the various tombs within this necropolis, including the tombs 71, 76 and 232, suggests that this part of the necropolis was used as a burial ground for generations by people that were socially and/or genetically related. Probably we are dealing with the necropolis of an important, extended family or clan at Crustumerium who used it over a period of 250 years. Members of this group were consciously interred in the vicinity of their ancestors.<sup>63</sup> Somewhat comparable clusters of tombs were identified in the necropolis of Osteria dell'Osa: for example group 230-293 and its predecessor, group 1-60 (Bietti Sestieri 1992a, 194-204).<sup>64</sup> Both groups of tombs, however, do not continue as long in time and are smaller than the Monte Del Buffalo necropolis at Crustumerium. Group 1-60 is a spatially isolated cluster of tombs

that were dug over a period of ca 100-150 years. It is furthermore characterized by a relatively high proportion of female tombs with a special *corredo*. Group 230-293 was also in use as the burial ground of a specific group for several generations. The two lineages, buried at Osteria dell'Osa in separate clusters for several generations, reflect conditions expressed also in the Monte Del Bufalo necropolis at Crustumerium. These burial groups are characterised by continuity and some opulence, as illustrated in the three female tombs presented above. It is probable that the women buried at Crustumerium in tombs 71, 76 and 232, besides being mistresses of a main household, might have shared other social/religious tasks that were transmitted from generation to generation.<sup>65</sup> However we prefer not to over-interpret the personal *corredo* in these three tombs.

## CONCLUSION

The presentation of the Monte Del Bufalo tombs 71, 76 and 232 indicates that according to Crustumerium standards we are dealing with some remarkable female burials. The three tombs have much in common, not just in date but also in content and location. Colleagues generally assign a high rank to comparable female tombs in the vicinity of Crustumerium. As an archaeological phenomenon such female tombs are recognised almost all over Italy for the period 800 to 650.<sup>66</sup> Thus they are not unique but still refer to a high social stratum.

A look at demographics implies that at least half of the population at Crustumerium was not formally buried in tombs. Selection took place. Most children and a proportion of men were for various reasons excluded. Moreover, a reconstruction of the social stratification in the main centres of central Italy indicates that communities were organised in clans and that only two social strata emerged; patricians and those who were not (a group that would later be called *plebs*). Competition between the various groups and main families that lived at Crustumerium during the period 800 to 650/625 will have been considerable, resulting in a relatively large number of tombs with an elaborate furnishing. We would like to stress that status differentiations are only possible for those tombs with a personal *corredo* or other features that are indicative. For most other tombs it might not be possible to reconstruct a specific level of social standing. As elsewhere, there existed several, contemporaneous burial grounds around Crustumerium. These large

groups of tombs indicate continuity of use by a specific group in the community. The Monte Del Bufalo necropolis is the only site in *Latium Vetus* with a considerable number of 6<sup>th</sup>-century tombs. The funerary area was in use for ca 250 years, longer than most other burial grounds known in *Latium Vetus*. As such the burials of the Monte Del Bufalo necropolis reflect an aspect of the social conditions during a period of time that covers the regal stage of nearby Rome. Within the larger Monte Del Bufalo necropolis, tombs 71, 76 and 232 characterize one phase of use and burial ritual, around 675-650. Looking at similar tombs in the vicinity, we suggest identifying these women as mistresses of a main household at Crustumerium. Their personal *corredo* marks them as women of standing, as ladies or *matronae*.

## NOTES

\* We first would like to thank for their comments and stimulating discussions Francesco di Gennaro, Barbara Belelli-Marchesini and Peter Attema. Pietro Bassanelli helped us with on-site restoration issues and the block-lift of tomb 232 while Stefania Di Giannantonio, physical anthropologist, provided us with the information retrieved from the skeletons.

Without the assistance of Gert van Oortmerssen (restorer), Erwin Bolhuis, Siebe Boersma, Sander Tiebackx and Miriam Los-Weijns (illustrators of the GIA) the artefacts in these tombs could not have been presented in such fine detail. Finally we thank the students who helped during the excavation of MDB tombs 71, 76 and 232, especially Elly Weistra and Marielle Bannink.

<sup>1</sup> All dates are BC. The three ladies from Crustumerium, presented in this article, would form a suitable addition to the fine publication of Pitzalis (2010). She catalogued and interpreted quite a number of comparable and contemporaneous female tombs in South Etruria, Latium Vetus and the Faliscan area. We wrote this article before the book by Pitzalis was published and therefore could not consider it in detail. We recommend it to those who are interested in this kind of female tombs.

<sup>2</sup> Cf. di Gennaro 2007; Nijboer/Attema 2011. In 2008, di Gennaro organized a session for the XVII Congresso Internazionale di Archeologia Classica; Incontri tra Culture nel Mondo Mediterraneo Antico. The title of the session was 'Crustumerium: i Latini tra Etruschi e Sabini'. Various colleagues presented papers during this session that discussed cultural identity at Crustumerium; [http://151.12.58.75/archeologia/index.php?option=com\\_content&view=article&id=60&Itemid=60](http://151.12.58.75/archeologia/index.php?option=com_content&view=article&id=60&Itemid=60).

<sup>3</sup> Cf. Amoroso 2008; Guidi 1998. The development of Crustumerium into, what appears to be, a small city state, is a main topic of research of the NWO-funded project 'The people and the state. Material culture, social structure and political centralization in central Italy (800-450): the case of Crustumerium'; <http://www.rug.nl/let/onderzoek/onderzoekinstutenten/gia/CurrentResearch/ironagetombs?lang=en>.

<sup>4</sup> Cornell 1995, 174-175.

<sup>5</sup> These four burial grounds have been partially excavated. Other tombs around Crustumerium were iden-



- tified through robbers' pits.
- <sup>6</sup> Data on the settlement of Crustumerium derive mainly from surveys (Quilici/Quilici Gigli 1980; Amoroso 2002). Some excavations in the settlement took place (cf. Jarva et al. 2008; Barbaro/Barbina/Borzetti 2008). [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en).
  - <sup>7</sup> The lion's share of the tombs has been excavated by the SSBAR. Other groups that were active at Crustumerium included teams of the universities of Oulu (under the direction of E. Jarva), Cambridge (led by U. Rajala), Iowa (under the supervision of R. De Puma) and Leipzig (directed by W.R. Teegeen).
  - <sup>8</sup> From 2006 onwards, the GIA joined the SSBAR investigations of the necropolis and excavated so far ca 40 tombs (cf. Nijboer et al. 2008).
  - <sup>9</sup> For example, a 6<sup>th</sup>-century tomb we have excavated, contained several depositions and merely one plate and one jar that, judging by their function, still refer to drinking and eating (MDB tomb 32). Meals were also later associated with the funerary ritual of Republican Rome, a period for which there are hardly any tombs in Latium Vetus. For an introduction on burials in Republican Rome, see Brill's New Pauly online; under burial D. Italy and Rome. Two funeral meals were customary, the *silicernium* on the day of the burial (frequently at the tomb: Non. 48,3) and the *cena novemdialis* (after the sacrifices for the dead on the ninth day), delineating the period for the family purification rites.
  - <sup>10</sup> The symbolism of some artefacts, given to the deceased, is discussed below. Tombs pertaining to the 6<sup>th</sup> century contain hardly any artefacts. At Crustumerium, the decrease in funerary wealth appears to have taken place during the period 650-600. By 600 social status was no longer expressed in the *corredo* (furnishing) of tombs. This development will be dealt with in detail in forthcoming publications.
  - <sup>11</sup> The absolute dates are preliminary. On account of their *corredo*, tombs 76 and 232 seem to be almost contemporaneous. Tomb 71 appears to be the youngest of the three and might even date slightly later than 650.
  - <sup>12</sup> The tomb measured: L: 4.10, W: 1.15, D max.: 0.30 and has a NNE/SSW orientation. The minute artefacts on top of the skeleton called for a block lift of the upper half of the skeleton. This block was later transported to Groningen, where it was excavated and the associated artefacts restored in 2007-2008 at the Laboratory for Conservation and Material studies (LCM; [www.lcm.rug.nl](http://www.lcm.rug.nl)).
  - <sup>13</sup> It is suggested that the ritual performed was a *circum-potatio* meaning that cups were passed around within a reserved group of participants who could have been of the same sex; di Gennaro 1990, 70; Beilelli Marchesini 2006, 223.
  - <sup>14</sup> Micozzi 1994.
  - <sup>15</sup> Beijer 1991, 22; Bartoloni 2003, 127-128. However, at Satricum and elsewhere, *holmoi* are also associated with male depositions (judging from the weaponry placed inside the tomb; Waarsenburg 1995, 91-95; Bartoloni 2003, 127-128).
  - <sup>16</sup> We suggest that the headdress can be interpreted as some sort of diadem (Nijboer/Attema 2011). It finds a parallel in the headdress on a statue from the Pedata necropolis at Chianciano dated to the late 5<sup>th</sup> century, which clearly depicts a twisted rod, and some kind of corona adorning the forehead (Torelli 2000, 379).
  - <sup>17</sup> Nijboer/Attema 2011.
  - <sup>18</sup> We suggest that the woman buried in tomb 232 was veiled (Nijboer/Attema 2011). Decorating textiles with bronze ornaments was quite common for ceremonial dresses in Italy during this period (cf. Negroni Catacchio 2007). Comparable pendants are reconstructed as hanging from a belt in tomb 85 of the Servici necropolis at Novilara (Bergonzi 2007, 91). We would like to thank P. von Eles who made the suggestion of a string worn from ear to ear in July 2009, on account of the X-ray photograph made of the block-lift, which shows the pendants in their original position. A string with pendants from ear to ear around a headscarf is depicted in an archaic relief from Chiusi (Torelli 1997, 70).
  - <sup>19</sup> Bietti Sestieri 1992, 835-836, 856-858.
  - <sup>20</sup> Traces of black organic sediments, around and beneath the deceased, indicate a burial in a tree trunk or coffin. Remains of tree-trunks and coffins are frequently found in the tombs at Crustumerium. The tomb measured L: 3.36, W: 1.06, D: 0.96 and had a NNW/SSE orientation.
  - <sup>21</sup> Iaia 2007, 523.
  - <sup>22</sup> Bartoloni 2006.
  - <sup>23</sup> The tomb measured L: 4.80, W: 2.45, D: 1.00 and has a NNE/SSW orientation. Due to the illicit excavations, only a few objects could be retrieved from the head and side *loculus*, most of them fragmentary.
  - <sup>24</sup> It is named after the site where it has been most frequently identified. Paolini 1990, 470-471; di Gennaro 2007.
  - <sup>25</sup> Beilelli Marchesini 2008.
  - <sup>26</sup> This bronze bowl was filled with a whitish paste, possibly some kind of porridge. The contents will be analysed in the near future. A parallel for this bronze tripod bowl and the suspension ring can be found in tomb 133 at Laurentina Acqua Acetosa. This tomb was labelled as '*principesca*' and dates to 675-650 (Bedini 2006, 467). At Crustumerium we have so far no *tombe principesche*.
  - <sup>27</sup> Since there is no indication of a second handle on the bowl, we believe that we are dealing with a *kyathos*, instead of a *kantharos*. Bronze *kyathoi* are very rare. The form of the bronze *kyathos* in Tomb 71 resembles those in fine bucchero (Torelli 2000, 483; Camporeale 1967, 115-116; Minto 1943, tavv. XXIII 3, 4, 5; XXXIX 9; XXXVIII 6, 8; Rasmussen 1979, 110-116, pl. 36). Bronze bowls with one high handle occur from the 8<sup>th</sup> century onwards (Iaia 2005, 188-207).
  - <sup>28</sup> Some shards and bronze remains were too small to identify the original objects. In addition, the tomb yielded a number of fragmentary, small, iron nails possibly used to fasten a wooden chest. Another detail regarding tomb 71 concerns the covering of some artefacts in the head *loculus* with oak-bark, a material that has also been recorded in some tombs at Castel di Decima (Zevi 1975, 239).
  - <sup>29</sup> Bartoloni 2003, 123-129.
  - <sup>30</sup> A mean population density of ca 100 people per hectare would coincide with estimations given for more urban sites such as Middle Republican Cosa or for various cities in Northern Italy during the 14<sup>th</sup> century AD (De Ligt 2008, 147-54). di Gennaro 1999, 5; Togninelli 2006, 36.
  - <sup>31</sup> The 7<sup>th</sup> and 6<sup>th</sup> centuries at Crustumerium are also accompanied by the transition from huts to houses. In some settlements in central Italy, groups of huts dating to the 7<sup>th</sup> century were excavated and so far they never reveal a close packing of structures, as is characteristic for towns. Huts are usually surrounded by open spaces, a fact that

- greatly affects the population density feasible in such settlements (cf. Maaskant-Kleibrink 1991; Gnade 2008, 20-8). Cf. Amoroso 2002.
- <sup>32</sup> Cf. Morris 1989, 74. This would amount to ca 20.000 tombs. In case we include the whole 8<sup>th</sup> century, this figure might rise to 25.000 tombs. An average life expectancy at birth of around 30 in antiquity is debated. Scheidel thinks that the life expectancy of the Roman elite was around twenty to thirty years and that this figure is comparable to that of the whole population (Scheidel 1999, 263, 280). An average life expectancy of 25 would raise the above given figure of depositions at Crustumium considerably. In the case of Crustumium, we need to account for the fact that in some 6<sup>th</sup> century chamber tombs, goods and corpses had been removed to create space for a subsequent deposition. The above exercise on demographics reveals merely an order of magnitude. Density of population in the rising urban centres of central Italy requires a more detailed discussion that would stretch the purpose of this paper. For example, density of population increases substantially with the emergence of two-storey buildings or parcelling of house plots along streets and alleys. In addition, one could include a discussion on average agricultural yield to sustain a certain number of people or an analysis of the few settlement excavations in central Italy that revealed more than just one hut or house (cf. Osborne 2005, 8; Rasmussen 2005, 86-88; Nijboer 1998, 42-44).
- <sup>34</sup> Scheidel 1999, 266. Scheidel writes that precise figures on infant and child mortality cannot be given but that they must have been very high. This is confirmed by historical accounts on surviving children of some Roman rulers and aristocrats (Scheidel 1999, 266-272).
- <sup>35</sup> It has been pointed out that in several burial grounds in southern Etruria and *Latium Vetus*, female tombs seem to outnumber male tombs during the 8<sup>th</sup> and 7<sup>th</sup> centuries (cf. Bartoloni 1997, 100-101).
- <sup>36</sup> We consider this a low estimate since the population at Crustumium may well have been over 3000 inhabitants or 50 persons/ha. The percentage of the population not buried at Crustumium, might be higher than 50 to 75%. A comparable exercise by Morris for Athens yielded much lower percentages of the population represented in graves (Morris 1989, 100-101).
- <sup>37</sup> On warrior tombs and *tombe principesche* see, for example, De Santis 2005.
- <sup>38</sup> Aigner-Foresti 2000. These conventional status markers have been recorded in ancient literature. Quite a number of these symbols are, for example, depicted on a terracotta plaque from Poggio Civitate, representing an elite assembly and dating to the early 6<sup>th</sup> century (cf. Rathje 1993).
- <sup>39</sup> Colonna 1991; De Santis 2009, 362, 365. In Latial tombs of the 10<sup>th</sup> century there are miniature, replica versions of *scudi bilobati* and chariots that by the 8<sup>th</sup> century are found in full scale in tombs. In his article Colonna relates the *scudi bilobati*, to the dance of the Salii (Colonna 1991). Recently, De Santis has excavated a number of tombs at some sites in the area around Rome, dating to the 10<sup>th</sup> century containing double shields and a complete miniature panoplia (De Santis 2006). A fine, bronze miniature replica of a chariot was excavated at S. Palomba Tombs 1 and 2 Rome, (De Santis 2009, 362, 365). I thank her once more for having shown me this miniature bronze replica of a chariot and discussing it with me.
- <sup>40</sup> Cf. Bartoloni 2003, 115-144; De Santis 2007; Iaia 2007.
- <sup>41</sup> They are also found in the burial grounds of smaller Latial settlements than Crustumium, such as the *tombe principesche* at Castel di Decima, Acqua Acetosa Laurentina, La Rustica and Satricum.
- <sup>42</sup> MDB tomb 40, excavated by the SSBAR, contained a footstool of Ceri type, covered with decorated bronze sheet (di Gennaro 1999, 10). This tomb is located in the Southern group of the Monte Del Bufalo necropolis, just like the three female tombs presented here. MDB tomb 40 can neither be classified as a warrior tomb or *tomba principesca*.
- <sup>43</sup> This is one of the aims of the NWO-funded project 'The people and the state. Material culture, social structure and political centralization in central Italy (800-450): the case of Crustumium'; <http://www.rug.nl/let/onderzoek/onderzoekinstututen/gia/CurrentResearch/ironagetombs?lang=en>.
- <sup>44</sup> Cf. Pacciarelli 2000, 217-76.
- <sup>45</sup> Beilelli Marchesini 2006.
- <sup>46</sup> Nijboer et al. 2008. We refrain from assigning a status level to these tombs at this stage since the *corredi* are clearly not complete.
- <sup>47</sup> In *Latium Vetus* some children were buried underneath or near the family home or hut. These burials represent however only a small portion of all the children that died. In general children do not seem to have been buried in tombs. E. Jarva has recently excavated a few interesting children tombs along the edge of the road trench of Crustumium, possibly pointing in the direction of infant burials within the settlement proper.
- <sup>48</sup> This is one of the research questions posed in the NWO-funded project. Here it suffices to mention that in nearby Gabii, the group of tombs without a *corredo*, that some believe to represent the lowest social stratum of a settlement during the 8<sup>th</sup> and 7<sup>th</sup> centuries, is limited (Bietti Sestieri 1992).
- <sup>49</sup> Cf. di Gennaro 2006, 228-229.
- <sup>50</sup> Cf. Rebay 2006, 199-240. This might be considered a bias of this method as well. Once we have been able to elaborate our dataset regarding the tombs of the Monte Del Bufalo necropolis, we will try social indexing methods. We intend to work with periods of 50 years since the funerary ritual at Crustumium changed considerably from 800 to 500. The main aim will be to recognise/describe burials of the lower social class.
- <sup>51</sup> Cf. Bietti Sestieri 1992; Guidi 1993; Bartoloni 1997.
- <sup>52</sup> In 2006 Smith published a book on the concept *Gens* (Smith 2006). This publication stresses that the concept changes through time and is somewhat ambiguous. It can be defined in historical but also in anthropological terms. For this article and the period discussed we use the word clan and not *gens*. It refers to a collection of families that were genetically and/or socially related. As such they formed a social unit, several of which formed a community.
- <sup>53</sup> The division into two social strata took place during the 8<sup>th</sup> and 7<sup>th</sup> centuries. Some prefer a 10<sup>th</sup>-9<sup>th</sup> century origin of this social stratification in basically two tiers. Later both strata are documented as patricians and *plebs*. According to the Law of the Twelve Tables, marriages between patricians and plebeians were forbidden. On patricians, see, for example: Cornell 1995, 84, 115-6, 142-3, 242-56; Smith 1996, 189-202; 2006, 251-80, 302-35. The words patricians and aristocrats are used in most textbooks as synonyms (cf. Bartoloni 2003). We prefer the term patrician because in history patrician systems tend to develop into oligarchies and this happened in central Italy during the 6<sup>th</sup> and 5<sup>th</sup> centuries in the primary centres.
- <sup>54</sup> De Santis 2005; Nijboer 2008, 440-444; Cornell 1995, 142.



- <sup>55</sup> On footstools of Ceri type see Jurgeit 2000; Aigner Foresti 2000, 276-277; Strøm 1997, 247.
- <sup>56</sup> Barloni 2003, 115-157.
- <sup>57</sup> Cf. Bartoloni 2003, 123-129.
- <sup>58</sup> These women may have performed certain tasks, such as spinning/weaving (see the spindle whorl in tomb 76) or they may have sacrificed (one of the functions attributed to a knife such as the one found in tomb 71). One could label the three women in tombs 71, 76 and 232 *matronae*. For an introduction on *matrona* see Brill's New Pauly s.v. *matrona*. *Matronae* were members of the wealthy upper class and were marked by clothing, having a *stola* and *vittae* (hairbands). In the early Republic and later they were given honours and privileges.
- <sup>59</sup> February 10<sup>th</sup>, 2011, B. Belelli Marchesini presented during a workshop in Groningen, a cluster of 91 tombs covering an area of 2,000 square meters in this necropolis.
- <sup>60</sup> For some hypotheses concerning this area of the necropolis at Monte Del Bufalo, see Belelli Marchesini 2008.
- <sup>61</sup> Tomb 222, introduced in Nijboer et al. 2008.
- <sup>62</sup> Cf. Bietti Sestieri 1992, 49-52; Pacciarelli 2000, 217-276; Belelli Marchesini 2008.
- <sup>63</sup> Later tombs were cut out in the bedrock hardly ever disturbing older tombs in this part of the necropolis. The present SSBAR-GIA research project is addressed to outline clusters through full analysis of the necropolis.
- <sup>64</sup> Bietti Sestieri 1992a, 194-204.
- <sup>65</sup> We like to thank Barbara Belelli Marchesini for this suggestion. The *corredo* of the three tombs does not allow us to elaborate much on these other tasks. The spindle whorl in tomb 76 indicates an activity as spinning/weaving while the iron knife in tomb 71 might point to sacrifices (cf. Bartoloni 2003, 123-129). The headdress in tomb 232 could imply a religious role but since it is a unique context, this remains hypothetical (Nijboer/Attema 2011).
- <sup>66</sup> Cf. Nijboer (2006) for three early examples of such female tombs.
- Bartoloni, G. 2003, *Le società dell'Italia primitiva: lo studio delle necropoli e la nascita delle aristocrazie*, Rome.
- Bartoloni, G. 2006, Madri di Principi, in P. Amann/M. Pedrazzi/H. Taeuber (eds), *Italo-Tusco Romana. Festschrift für Luciana Aigner-Foresti*, Vienna, 13-22.
- Bedini, A., 2006, Laurentina Acqua Acetosa, in M.A. Tomei (ed.), *Roma. Memorie dal sottosuolo. Ritrovamenti archeologici 1980/2006*, Milan, 465-479.
- Belelli Marchesini, B. 2006, Tomba 34 Località Sasso Bianco, in M.A. Tomei (ed.), *Roma. Memorie dal sottosuolo. Ritrovamenti archeologici 1980/2006*, Milan, 223-227.
- Belelli Marchesini, B. 2008, Necropoli di Crustumerium: bilancio delle acquisizioni e Prospettive, in *Alla ricerca dell'identità di Crustumerium. Primi risultati e prospettive di un progetto internazionale*. Atti della giornata di studio organizzata dall'Institutum Romanum Finlandiae e dalla Soprintendenza Speciale ai Beni Archeologici di Roma. Roma, 5 marzo 2008: [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en).
- Beijer, A. 1991, Impasto pottery and social status in Latium Vetus in the Orientalising period (725-575 BC): an example from Borgo le Ferriere ('Satricum'), in *Papers of the Fourth Conference of Italian Archaeology*, London, II, 21-39.
- Bergonzi, G. 2007, Donne del Piceno dall'età del ferro all'Orientalizzante, in P. von Eles (ed.), *Le ore e i giorni delle donne. Dalla quotidianità alla sacralità tra VIII e VII secolo a.C.*, Verucchio, 87-95.
- Bietti Sestieri, A.M. (ed) 1992, *La Necropoli Laziale di Osteria dell'Osa*, Rome.
- Bietti Sestieri, A.M. 1992a, *The Iron Age community of Osteria dell'Osa*, Cambridge.
- Camporeale, G. 1967, *La Tomba del Duce*, Florence.
- Colonna, G. 1991, Gli scudi bilobati dell'Italia centrale e l'Ancile dei Salii, *ACI* 43, 55-122.
- Cornell, T.J. 1995, *The Beginnings of Rome: Italy and Rome from the Bronze Age to the Punic Wars (c. 1000-264 BC)*, London.
- De Ligt, L. 2008, The population of Cisalpine Gaul in the time of Augustus, in L. De Ligt/S. Northwood (eds), *People, Land and Politics. Demographic developments and the Transformation of Roman Italy 300 BC – AD 14* (Mnemosyne Supplement 303), Leiden, 139-183.
- De Santis, A. 2005, Da Capi Guerrieri a Principi: La strutturazione del potere politico nell'Etruria protourbana, in *Dinamiche di sviluppo delle città nell'Etruria Meridionale* (Atti del XXIII Convegno di Studi Etruschi ed Italici), Pisa, 615-631.
- De Santis, A. 2006, A research project on the earliest phases of the Latial Culture, in P. Attema/A.J. Nijboer/A. Zifferero (eds), *Papers in Italian Archaeology VI*, Oxford, 156-163.
- De Santis, A. 2007, Posizione sociale e ruolo delle donne nel Lazio protostorico, in P. von Eles (ed.), *Le ore e i giorni delle donne. Dalla quotidianità alla sacralità tra VIII e VII secolo a.C.*, Verucchio, 103-109.
- De Santis, A. 2009, La definizione delle figure sociali riconoscibili in relazione alla nascita e allo sviluppo della cultura laziale, *Scienze dell'Antichità* 15, 359-370.
- di Gennaro, F. 1990, Crustumerium, il centro protostorico e arcaico e la sua necropoli, in R. Di Mino/M. Bertinetti (eds), *Archeologia a Roma*, Rome, 68-72.
- di Gennaro, F. 1999, *Itinerario di visita a Crustumerium*, Rome.
- di Gennaro, F. 2006, Le olle a coppette e la ceramica di impasto a superficie rossa dipinta in bianco, in M.A. Tomei (ed.), *Roma. Memorie dal sottosuolo. Ritrovamenti archeologici 1980/2006*, Milan, 228-229.

## BIBLIOGRAPHY

- Aigner Foresti, L. 2000, Orientalische Elemente im etruskischen Königtum?, in F. Prayon/W. Röllig (eds), *Der Orient und Etrurien* (Akten des Kolloquiums, Tübingen 1997), Pisa/Rome, 275-286.
- Amoroso, A. 2002, Nuovi dati per la conoscenza dell'antico centro di Crustumerium, *ACI* 53, n.s. 3, 287-329.
- Amoroso, A. 2008, Il territorio di Crustumerium e dei centri limitrofi nella prima età del Ferro. Dati e prospettive, in *Alla ricerca dell'identità di Crustumerium. Primi risultati e prospettive di un progetto internazionale*. Atti della giornata di studio organizzata dall'Institutum Romanum Finlandiae e dalla Soprintendenza Speciale ai Beni Archeologici di Roma. Roma, 5 marzo 2008: [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en).
- Barbaro, B./P. Barbina/ M.R. Borzetti 2008, L'abitato di Crustumerium: nuove acquisizioni, in *Alla ricerca dell'identità di Crustumerium. Primi risultati e prospettive di un progetto internazionale*. Atti della giornata di studio organizzata dall'Institutum Romanum Finlandiae e dalla Soprintendenza Speciale ai Beni Archeologici di Roma. Roma, 5 marzo 2008: [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en).
- Bartoloni, G. (ed.) 1997, *Le necropoli arcaiche di Veio* (Giornata di studio in memoria di Massimo Pallottino), Rome.

- di Gennaro, F. 2007. Le tombe a loculo di età orientalizzante di Crustumerium, in *Tusculum. Storia Archeologia Cultura e Arte di Tuscolo e del Tuscolano*, Rome, 163-173.
- di Gennaro, F. 2009. From Crustumerium: Preventing Looting by Exchanging Loans for Preservation of Cultural Patrimony, in: S. Bell and H. Nagy (eds), *New Perspectives on Etruria and Early Rome in Honor of Richard Daniel De Puma*, Madison, 119-133.
- Gnade, M. (ed.), 2008, *Satricum. Trenta anni di scavi olandesi*, Amsterdam, Leuven.
- Guidi, A. 1993, *La necropoli veiente dei Quattro Fontanili: nel quadro della fase recente della prima Età del Ferro Italiana*, Florence.
- Guidi, A., 1998, The emergence of the state in central and northern Italy, *Acta Archaeologica* 69, 139-161.
- Iaia, C. 2005, *Produzioni toreutiche della prima età del ferro in Italia centro-settentrionale: stili decorativi, circolazioni, significato*, Pisa.
- Iaia, C., 2007, Elements of female jewellery in Iron Age Latium and southern Etruria: identity and cultural communication in a boundary zone, in: M. Blečić et al. (eds), *Scripta praehistorica in honorem Biba Teržan* (Situla 44), Ljubljana, 519-531.
- Jarva, E. et al. 2008, Excavations in the Road Trench area and research prospects in the future, in: *Alla ricerca dell'identità di Crustumerium. Primi risultati e prospettive di un progetto internazionale*. Atti della giornata di studio organizzata dall'Institutum Romanum Finlandiae e dalla Soprintendenza Speciale ai Beni Archeologici di Roma. Roma, 5 marzo 2008: [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en)
- Jurget, F., 2000, Die Fussbänke vom Typ Ceri, in F. Prayon/W. Röhlig (eds), *Der Orient und Etrurien*, Akten des Kolloquiums, Tübingen 1997, Pisa-Rome, 219-226.
- Maaskant-Kleibrink, M. 1991, Early Latin settlement plans at Borgo le Ferriere, <Satricum>. Reading Mengarelli's maps, *BABesch* 66, 51-114.
- Micozzi, M. 1994, "White on Red": una produzione vascolare dell'orientalizzante etrusco, Rome.
- Minto, A., 1943, *Populonia*, Florence.
- Morris, I. 1989, *Burial and ancient society, the rise of the Greek city-state*, Cambridge.
- Negroni Catacchio, N. 2007, Le vesti sontuose e gli ornamenti monili d'ambra e di materie preziose nelle tombe femminili di età orientalizzante e arcaica in Italia, in M. Blečić et al. (eds), *Scripta praehistorica in honorem Biba Teržan* (Situla 44), Ljubljana, 533-556.
- Nijboer, A.J. 1998, *From Household Production to Workshops. Archaeological Evidence for Economic Transformation, Pre-monetary Exchange and Urbanization in Central Italy from 800 to 400 BC*, Groningen.
- Nijboer, A.J. 2006, Coppe di tipo Peroni and the beginning of the Orientalizing phenomenon in Italy during the late 9th century BC, in *Studi di Protostoria in onore di Renato Peroni*, Borgo San Lorenzo (FI), 288-304.
- Nijboer, A.J. 2008, Italy and the Levant during the Late Bronze and Iron Age, in C. Sagona (ed.), *Beyond the Homeland: Markers in Phoenician Chronology* (Ancient Near Eastern Studies Supplement Series, Supplement 28), Leuven, 357-394.
- Nijboer, A.J./ P.A.J. Attema/G.J.M. van Oortmerssen 2008, Two excavation campaigns of the University of Groningen at Monte Del Bufalo, Crustumerium. Preliminary results and future plans, in *Alla ricerca dell'identità di Crustumerium. Primi risultati e prospettive di un progetto internazionale*. Atti della giornata di studio organizzata dall'Institutum Romanum Finlandiae e dalla Soprintendenza Speciale ai Beni Archeologici di Roma. Roma, 5 marzo 2008: [http://www.irfrome.org/ei/index.php?option=com\\_content&view=section&layout=blog&id=13&Itemid=64&lang=en](http://www.irfrome.org/ei/index.php?option=com_content&view=section&layout=blog&id=13&Itemid=64&lang=en)
- Nijboer, A.J./ P.A.J. Attema 2011, Cultural characteristics of the ancient community living at Crustumerium and the excavations of the Groningen Institute of Archaeology at the Monte Del Bufalo necropolis, in *Atti del XVII Congresso Internazionale di Archeologia Classica; Incontri tra Culture nel Mondo Mediterraneo Antico*, Rome, September 22-26, 2008. [http://151.12.58.75/archeologia/bao\\_document/articoli/3\\_NIJBOERATTEMA.pdf](http://151.12.58.75/archeologia/bao_document/articoli/3_NIJBOERATTEMA.pdf)
- Osborne, R. 2005, Urban Sprawl: What is Urbanization and Why does it Matter?, in R. Osborne/B. Cunliffe (eds), *Mediterranean urbanization 800 - 600 B.C.*, Oxford, 1-16.
- Paolini, L. 1990, Crustumerium - Scavi nella necropolis, *BCom* 92, 1987-1988, 468-471.
- Pacciarelli, M. 2000, *Dal Villaggio alla Città*, Florence.
- Pitzalis, F. 2010, *La volontà meno apparente. Donne e società nell'Italia centrale tirrenica tra VIII e VII secolo a.C.*, Rome.
- Quilici, L./S. Quilici Gigli, 1980, *Crustumerium*, Rome.
- Rasmussen, T.B. 1979, *Bucchero pottery from southern Etruria*, Cambridge.
- Rasmussen, T.B., 2005, Urbanization in Etruria, in R. Osborne/B. Cunliffe (eds), *Mediterranean urbanization 800 - 600 B.C.*, Oxford, 71-90.
- Rathje, A. 1993, Il fregio di Murlo: status sulle considerazioni, in E. Rystedt/C. Wikander/Ö. Wikander (eds), *Deliciae Fictiles*, Stockholm, 135-138.
- Rebay, C. 2006, *Das hallstattzeitliche Gräberfeld von Statzen-dorf, Niederösterreich* (Universitätsforschungen zur prähistorischen Archäologie 135), Bonn.
- Scheidel, W. 1999, Emperors, aristocrats and the grim reaper: Towards a demographic profile of the Roman elite, *CQ* 49, 254-81.
- Smith, C.J. 1996, *Early Rome and Latium: economy and society, c.1000 to 500 BC*, Oxford.
- Smith, C.J., 2006, *The Roman Clan. The Gens from ancient Ideology to modern Anthropology*, Cambridge.
- Strøm, I. 1997, Conclusioni, in Bartoloni 1997, 245-247.
- Togninelli, P. 2006, *Monterotondo. Il Museo Archeologico e il Territorio*, Dragoni.
- Togninelli, P. 2009, Between Crustumerium and Eretum: Observations on the First Iron Age Phases and the Finds from the Archaic Period, in: S. Bell and H. Nagy (eds), *New Perspectives on Etruria and Early Rome in Honor of Richard Daniel De Puma*, Madison, 3-21.
- Torelli, M. 1997, *Il rango, il rito e l'immagine. Alle origini della rappresentazione storica romana*, Milan.
- Torelli, M. (ed.) 2000, *Gli Etruschi*, Milan.
- Waarsenburg, D.J. 1995, *The Northwest Necropolis of Satricum* (Scriinium VIII - Satricum III), Amsterdam.
- Zevi, F. et al. 1975, Castel di Decima Roma - La necropoli arcaica, *NSc* 29, 233-408.

UNIVERSITY OF GRONINGEN  
GRONINGEN INSTITUTE OF ARCHAEOLOGY  
POSTSTRAAT 6  
NL-9712 ER GRONINGEN  
A.J.Nijboer@rug.nl  
S.L.Willemsen@rug.nl

# Dress and Identity in Iron Age Italy

## *Fibulas as Indicators of Age and Biological Sex, and the Identification of Dress and Garments*

Cecilie Brøns

### Abstract

*The present article treats the question of whether we can determine aspects of identity in the form of biological sex and age by the presence of fibulas. Individual fibula types are analysed in relation to examined skeletons in order to determine if respectively men, women or certain age groups can be identified through different fibula types. These analyses are used as a starting point towards an investigation of Iron Age dress through a survey of the evidence at hand. Thus iconographical and other archaeological evidence in the form of e.g. preserved textiles and ornaments are investigated in order to gain a more comprehensive understanding of the relation between biological sex, age and dress.\**

### INTRODUCTION

Dress is one of the most important visual communications for illustrating group affiliation and individual differentiation in contemporary ethnology. Dress is of great importance among non-verbal communication forms because people dress in specific ways to confirm or deny social norms.<sup>1</sup> Ethnological studies emphasise that dress and ornament are the primary ways of communicating identity as they are transmitters of individual and group identities such as age, sex, status, and ethnicity, albeit sex is traditionally considered the basic criterion in the choice of dress.<sup>2</sup>

But what is the situation for Iron Age Italy? Our knowledge of how people were dressed in the Iron Age and earlier periods is not extensive due to the scarce examples of preserved textiles and iconographic depictions and the absence of literary sources. Among the few indications of dress are the fibulas. Particularly, the fibulas are among the most familiar and extensively studied artefacts from the Italian Iron Age, and, in addition, they are among the most common finds in the graves. For this reason, they are an obvious point of departure for a study of dress and identity.

This article treats the question of whether we can determine aspects of identity, in the form of biological sex and age, through the presence of fibulas based on artefact association with individuals of known sex and age. The individual fibula types are analysed in relation to the examined skeletons in order to determine whether they can be used as indicators of biological sex, that is

if men and women can be identified through different fibula types.<sup>3</sup> Secondly, the deposition of fibulas in graves is analysed for age-related patterns.<sup>4</sup>

These analyses are used as a starting point for an investigation of our knowledge of Iron Age dress through a critical survey of the evidence at hand. Thus, iconographical evidence and other archaeological evidence in the form of e.g. preserved textiles and ornaments are investigated to understand how men, women, children and elders were dressed in order to gain a more comprehensive understanding of the relation of biological sex, age and dress.

### *Identification of biological sex and age through objects*

The method of employing certain objects to identify biological sex in the graves is, in many ways, obvious for archaeology since this research branch focuses on artefacts and is dependent on them in the understanding of past societies. Theoretically, objects can thus be perceived as having a gender. This should be understood as an object acquiring a gender, either on the grounds on intrinsic characteristics or because of inferential associations.<sup>5</sup> Artefacts (grave goods) are therefore traditionally perceived by archaeologists as gendered because of their repeated and (often) exclusive association with individuals of a certain biological sex. As a result, grave goods are designated as 'female', 'male' or 'gender neutral'.<sup>6</sup>

In the Italian mortuary archaeology stereotypes are traditionally employed to explain what cate-



gorises a woman, and what categorises a man. Publications typically regard tools for spinning and weaving as indications of a female, while weapons are considered indications of a male. These attributions of weapons as male and textile tools as female have been transferred to other objects based on their association with the two respective groups of artefacts.<sup>7</sup> *Fibule serpeggianti* have therefore been identified as male, as, at many sites, they are often encountered with weapons, while *fibule ad arco* and *fibule a sanguisuga* have been perceived as female based on their presence in graves with textile tools. As an example G.C. Cianferoni writes on Etruria:

*'Lo studio comparativo dei contesti funerari delle necropoli etrusche rivela che, già a partire dal IX secolo a.C., esiste una rigida distinzione fra corredi maschili e corredi femminili, resa evidente da una precisa caratterizzazione degli ornamenti e degli oggetti di uso personale: fibulae ad arco serpeggianti, rasoi ed armi per gli uomini, fibulae ad arco semplice o ingrossato e strumenti per la lavorazione della lana, soprattutto fusaiole e rocchetti d'impasto, per le donne.'*<sup>8</sup>

Differentiating male from female graves based on the association between fibulas and gendered artefacts have resulted in the acceptance of fibulas as indicators of biological sex. Yet, this method is questionable, since arguments for different male and female artefacts are not as reliable as many state.<sup>9</sup> Furthermore, the method is without a solid theoretical basis, since cultural variations in the attribution of cultural gender identity to biologically determined sexes do occur.

With regard to the usability of objects as indicators of age, this is not a phenomenon which has received much attention in relation to the study of early necropolises in Italy. Many scholars have especially focused on sex, but not on age to the same extent. This is due to the fact that biological age is only detectable in the skeletons, which are only rarely included in published Italian studies. Archaeologists are, to a certain extent, able to distinguish children from adults, but not the precise age of the individuals.<sup>10</sup> Thus, there are no previous hypotheses concerning which grave goods were given to children and elders compared to adult individuals.

The age of the individual is, however, interesting in relation to the study of necropolises, as age can have an ample influence on how the deceased was treated in the grave since age contributes to the definition and creation of individuality.<sup>11</sup> Recent research has shown that archaeology has treated the adult age as an absolute supremacy,

and earlier studies have tended to exclude children as a category.<sup>12</sup> Furthermore, it has been argued that the few archaeological studies of children (but also elders) are a consequence of the same androcentric perceptions, which, especially earlier, marginalised or even disregarded women.<sup>13</sup> Until recently, archaeological research with regard to children has mainly focused on the high mortality rate among children and the under-representation of children in the necropolises, or on more sensational studies of customs involving human sacrifice and infanticide.<sup>14</sup> However, today, an increasing number of studies focus on childhood, while old age still seems to be neglected.<sup>15</sup>

### Material

The point of departure for this article is two groups of material: anthropological determinations of the skeletal remains and fibulas. The analyses are based on a juxtaposition of these two sources of information. In regard of the fibulas only type and number are considered. Even though size and material might contribute further information, an examination hereof is beyond the scope of this article.

Anthropological determinations of the skeletons are employed despite such determinations not always being able to produce final conclusions with regard to age and biological sex, giving a considerable element of uncertainty.<sup>16</sup> Anthropological determinations of biological sex with regard to child skeletons are very problematic, and hence they are not incorporated here.<sup>17</sup> Finally, it should be noted that the accuracy of the determinations is highly dependent on the state of preservation of the skeleton, and it is, of course, preferable if the entire skeleton can be examined.<sup>18</sup>

The study is based on 437 graves with grave goods and preserved skeletal material analysed by physical anthropologists. According to their results, the graves consist of 155 males, 137 females, 46 individuals of unknown biological sex and 99 children. The geographical area comprises Central and Southern Italy (fig. 1). The Etruscan sites are Sesto Fiorentino<sup>19</sup> and Veii Quattro Fontanili.<sup>20</sup> In Latium: Ardea,<sup>21</sup> Forum Romanum<sup>22</sup> (Forum of Caesar area B and the area in front of the temple to Antoninus Pius and Faustina), Tivoli<sup>23</sup> and Osteria dell'Osa.<sup>24</sup> In Campania: Pontecagnano<sup>25</sup> and Sala Consilina.<sup>26</sup> In Abruzzo: Alfedena<sup>27</sup> and Fossa.<sup>28</sup> In Calabria: Torre Galli.<sup>29</sup> In Basilicata: Incoronata.<sup>30</sup>



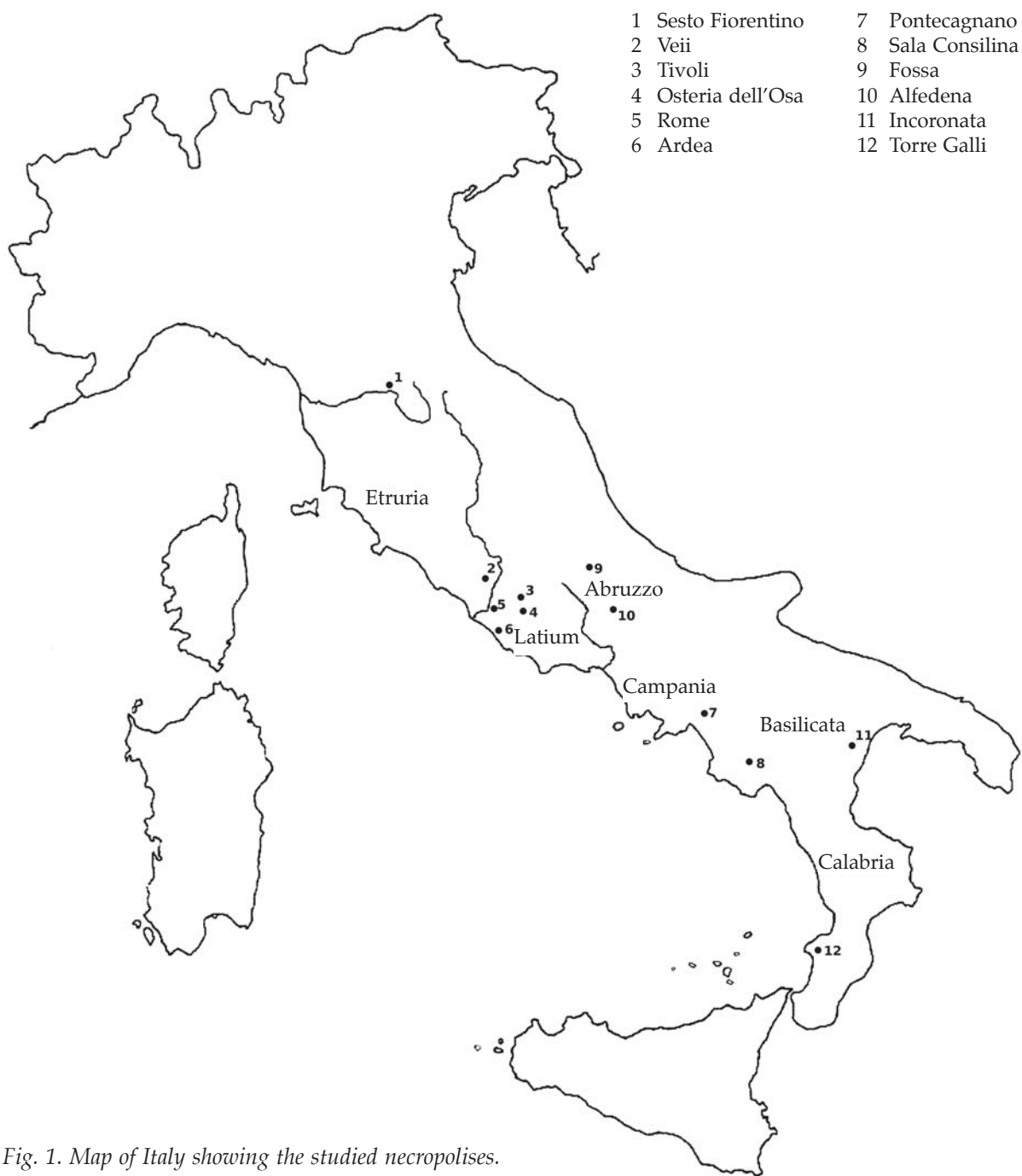


Fig. 1. Map of Italy showing the studied necropolises.

#### *Fibula types*

Almost every site and every necropolis have their own typology. These typologies are often very elaborate, which entails the risk of losing the comprehensive view. However, scholars seem to agree upon the general typology on which this study is based.<sup>31</sup> This is, however, not without problems, as

specific regional differences often exist. Such regional differences will be disregarded here, as the aim is not to carry out a detailed fibula study, but rather a more general outline of how and to what extent we can use fibulas as indicators of identity.

Fibulas belonging to the Italian Iron Age can be divided into four main categories based on the shape of the arch.<sup>32</sup> The most common type is the



Fig. 2. Fibula ad arco (Toms 1998, 93, fig. 2).



Fig. 3. Fibula serpeggiante (Toms 1998, 93, fig. 2).

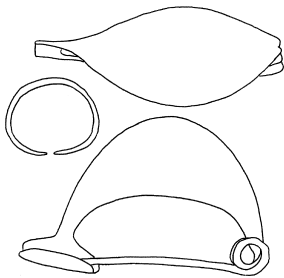


Fig. 4. Fibula a sanguisuga (drawing author).

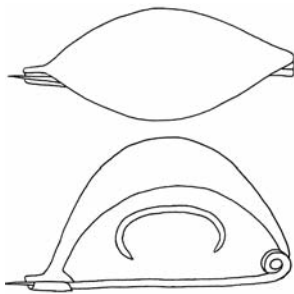


Fig. 5. Fibula a navicella (drawing author).

*fibula ad arco* (fig. 2).<sup>33</sup> The basic form is very simple, yet many variations exist, depending on regional and local tendencies as well as chronology.<sup>34</sup> In this study, several sub-types are discussed with the *fibule ad arco*, e.g. those found at Veii, Pontecagnano, Alfedena and Incoronata.<sup>35</sup> *Fibule ad arco* occur from the end of the late Bronze Age and in the Iron Age, and they have been recovered throughout the Italian peninsula. Another main type is the *fibula serpeggiante*, which is common in the Italian peninsula (fig. 3).<sup>36</sup> The earliest types of *fibule serpeggianti* occur in Italy at the end of the late Bronze Age, and they continue to be used throughout the Iron Age. Finally, the *fibula a sanguisuga* and the *fibula a navicella* are included, despite the fact that these types constitute a formal development of the *fibula ad arco* (figs 4-5). The two types belong to the late phase of the

Early Iron Age, with some types continuing into the Orientalising period.<sup>37</sup>

#### FIBULAS AND BIOLOGICAL SEX

##### *Fibula ad arco* (fig. 6)

Analysis shows that, on most sites, it is not possible to use *fibule ad arco* as an indicator of biological sex, e.g. in Campania, Abruzzo and Basilicata. In Latium, on the other hand, the *fibule ad arco* seem primarily to be deposited with women at Osteria dell'Osa, Ardea and Tivoli, while, in Rome, the type does not appear to be restricted to a specific sex, even if there is a slight overrepresentation of male graves. In general, only at Veii does the type not appear with men. Yet, on this site, only few male graves have been identified, which creates a certain bias.

On many sites, the situation is complex since the fibulas belong to different sub-types: at Veii the sub-types are *ad arco ingrossato*, *ad arco ribassato* and *ad arco di verga*. All these sub-types do not appear with men, and they might therefore be restricted to women. At Pontecagnano the sub-types are *ad arco ingrossato*, *ad arco rivestito* and *ad arco di occhielli doppi*, but none are restricted to a certain sex. At Alfedena the sub-types are *fibule ad arco di verga*, *arco a nastro*, *arco a lozanga* and *arco a bozze* of which neither are exclusive to a certain sex. At Incoronata there is only one *fibula ad arco*, but, instead, four other types: *ad arco a doppia spirale*, *ad arco a quattro spirali*, *ad arco a ponte* and *con staffa a disco*. The *fibule ad arco a ponte* come from three male graves, and they might be an indicator of biological sex. In regard to the three other types at Incoronata, they occur only in female graves, but the number is too low to make it possible to draw any conclusions.

##### *Fibula a sanguisuga* (fig. 7)

*Fibule a sanguisuga* also have different distribution patterns on the individual sites, and, in several of the sites treated here, the type was not represented.<sup>38</sup> At Veii, Ardea and Fossa *fibule a sanguisuga* are found only in female graves and in graves of unknown sex, and, consequently, this fibula type can, with caution, be used as an indicator of biological sex on these sites. At Tivoli and Pontecagnano there is an overrepresentation of female graves with this fibula type in comparison to male graves. On the contrary, at Sesto Fiorentino the type is solely found in one male grave.

##### *Fibula serpeggiante* (fig. 8)

*Fibule serpeggianti* have mostly been recovered from

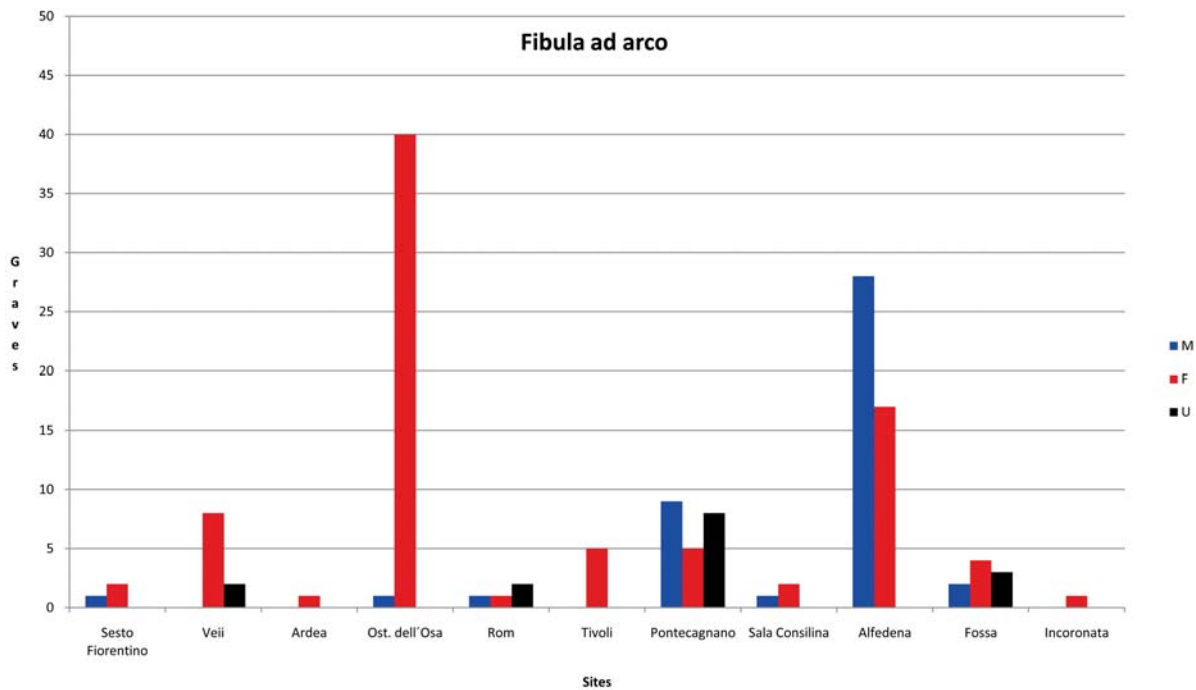


Fig. 6. Distribution of fibule ad arco in regard to biological sex (diagram Kees van der Veer).

male graves. At Fossa and Veii the dispersion of fibulas between the sexes is equal, and they are found in both male and female graves. In general, there is only a slight overrepresentation of male graves with *fibule serpeggianti*, and where they are recorded, they also occur in female graves. The distribution appears to be around 60/40% (male/female ratio) at both Rome and Pontecagnano, at Sala Consilina closer to 80/20% (male/female ratio). Thus, there are no grounds for using *fibule serpeggianti* as an indicator of sex. At Osteria dell'Osa the overrepresentation of males with *fibule serpeggianti* is very large, and only two women are buried with this fibula type. Nevertheless, two graves are sufficient to reject *fibule serpeggianti* as a sex-determining artefact.

Several scholars still work with a clear-cut sex division of the fibula types, especially at Latial and Campanian sites, using them for sex determination of the graves.<sup>39</sup> Pacciarelli proposes the same for southern Italy where he considers *fibule serpeggianti* as male<sup>40</sup> and *fibule ad arco* as female, on the basis of the associated grave goods.<sup>41</sup> However, there are also examples of publications in which fibula-based biological sex determination is dismissed.<sup>42</sup>

The analysis of the selected data suggests that

*fibule ad arco* and a *sanguisuga* are mainly female while *serpeggianti* are mainly male. This corresponds to Tom's results based on fibulas from Veii and Tarquinia. She concludes: 'The arch bow brooch is weakly preferentially female at both sites,'<sup>43</sup> and that *fibule serpeggianti* are 'strongly preferentially male.'<sup>44</sup> Also Amann considers the *fibula serpeggiante* a male fibula type, but emphasises that exceptions exist.<sup>45</sup> Furthermore, *fibule ad arco* have been recovered together with both textile tools (usually considered female indicators) and with razors and helmets (usually considered male indicators), which means that it is doubtful whether fibulas are, indeed, related to the sex of the deceased.<sup>46</sup>

In conclusion, the general fibula types are not useful indicators of biological sex since all types are found with both men and women, although *fibule a sanguisuga* appear to be more often related with women. Consequently, sex determination of graves based on the presence of certain fibula types alone should be avoided. It is, however, important to take the regional differences into consideration seeing that the situation appears to differ from site to site.

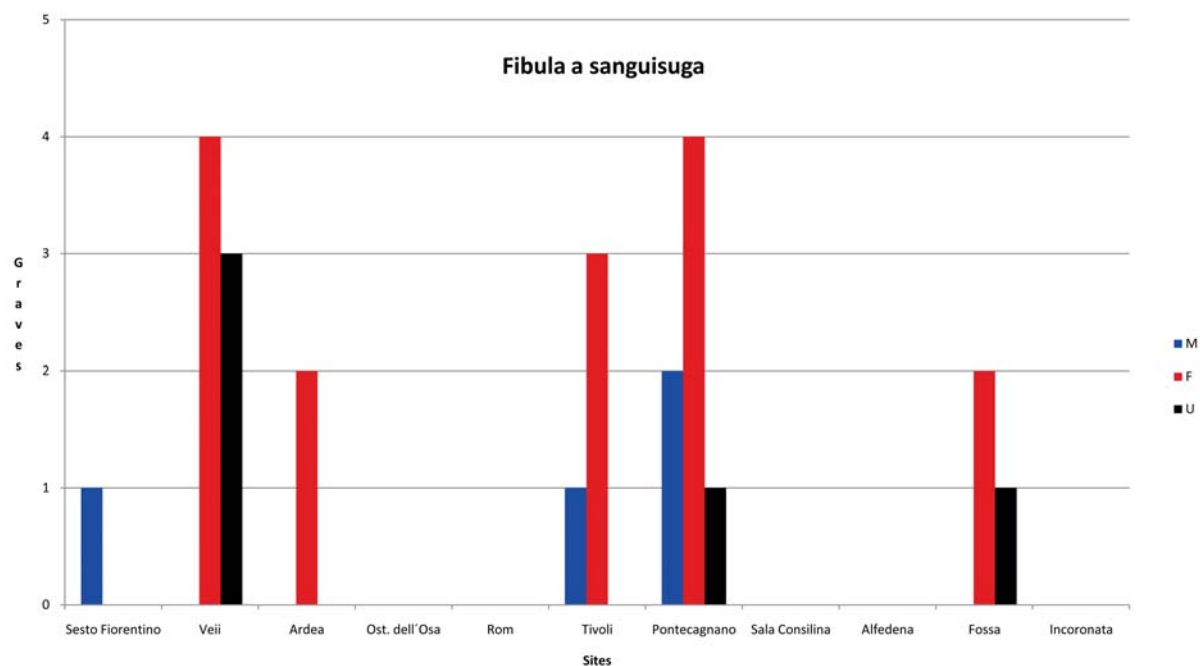


Fig. 7. Distribution of fibule a sanguisuga in regard to biological sex (diagram Kees van der Veer).

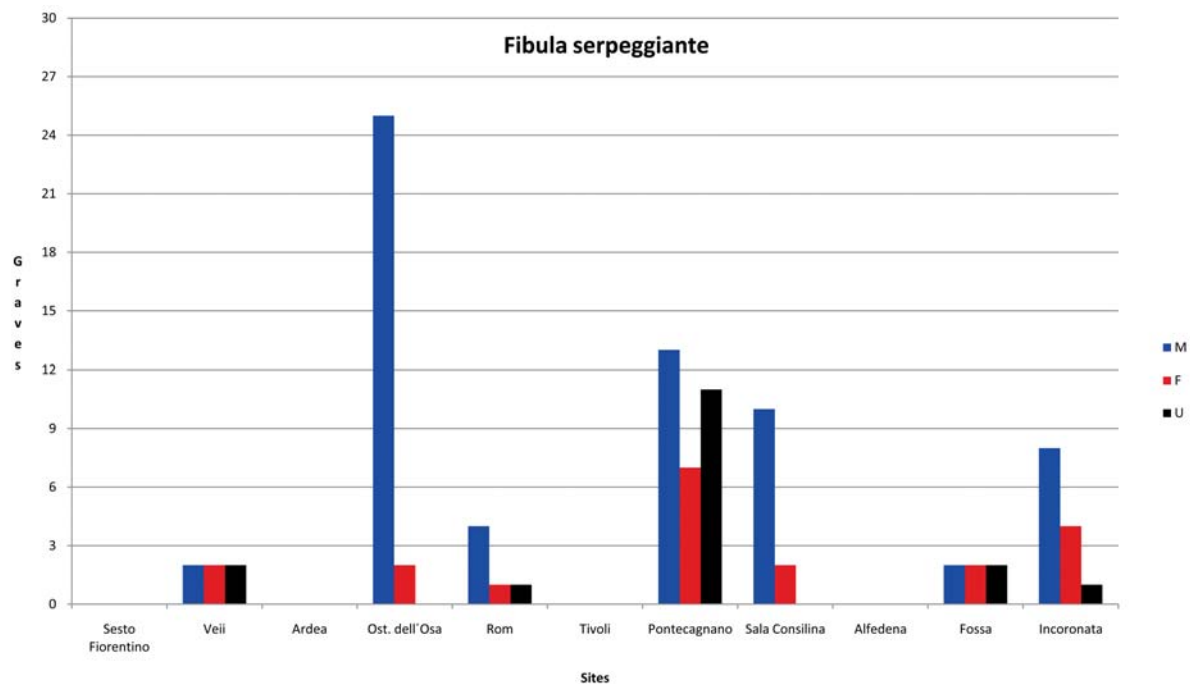


Fig. 8. Distribution of fibule serpeggianti in regard to biological sex (diagram Kees van der Veer).



### Age groups

When studying archaeological evidence from graves, it is necessary to employ age groupings since age determinations of the skeletons are often not sufficiently precise to determine the exact age. In some publications age is stated in years, but in several instances, the preference is for a classification of the skeletons based on five age categories often employed in anthropology: *infans*, *juvenis*, *adultus*, *maturus* and *senilis*. Previously, these categories were not applied in the same way by all scholars, and the individual groups therefore cover different age spans in older publications.<sup>47</sup> In 1960 Vallois undertook a division of these categories, which he juxtaposed with fixed age groups in order to compare material from different contexts. However, these groupings have been criticised, especially with regard to children, since important social differences between children of different ages will be lost if treated as one single age category.<sup>48</sup> For this reason, Cuozzo has introduced subdivisions for children and young individuals.<sup>49</sup> In this study, Cuozzo's divisions are employed, but one additional age group for children has been added to give the age groups more or less the same age span. In addition, categories without any exact age specifications for adults and children have been introduced (table).

However, it should be kept in mind that exact age determinations of older individuals can be

difficult, and finer distinctions can therefore be problematic. While the age at death of sub-adult individuals can be determined quite accurately, it is harder to determine in adults since the skeleton of a full-grown individual only changes little throughout the life span.<sup>50</sup> Thus, some uncertainty exists, as to whether an older individual belong to e.g. age group A3 or A4.

#### *Fibula ad arco* (fig. 9)

The deposition of *fibule ad arco* does not appear to be related to age since they have been recovered for all age groups at all sites. The absence of child graves at Alfedena and the few examples from Sala Consilina explain why they do not seem to appear in child graves at these sites. *Fibule ad arco* alone are therefore a very poor indicator of age.

#### *Fibula a sanguisuga* (fig. 10)

In general, *fibule a sanguisuga* have a lower occurrence among the graves treated here, but they do not seem to be usable as an indicator of age as the type has been recovered by and large for all age groups with the exception of young individuals. However, in Rome, a single *fibula a sanguisuga* was found in a child grave, and none with adults.

#### *Fibula serpeggiante* (fig. 11)

The *fibula serpeggiante* is the only fibula type in this study that has been recovered in graves belonging to age group C1. This could, however, very well be related to the very scarce occurrence of graves in this age group on the necropolises in this period since the material studied here only includes one such grave.

The presence of *fibule serpeggianti* in the graves is not related to age. In Veii, Rome, Pontecagnano and Fossa, this type occurs with children, young individuals and adults. Osteria dell'Osa illustrates an interesting tendency as only one *fibula serpeggiante* has been recovered in one out of 35 children's graves. Thus, this fibula type seems to be restricted primarily to adults on this site.

#### *Fibula a navicella* (fig. 12)

Among the graves studied, *fibule a navicella* have only been found at a few sites.

In Veii three were recovered in a grave belonging to a child in age group C4, and, in Rome, they occur in two graves both of children of age group C1 and C3 respectively. In Fossa one such fibula belongs to a grave in age group C4. Accordingly, *fibule a navicella* can possibly be used as an indicator of a child, but not of a specific minor age group.

Age group		Age in years
C1	Child 1	0 - 1
C2	Child 2	1 - 3
C3	Child 3	3 - 6
C4	Child 4	6 - 9
C5	Child 5	9 - 11
C	Child	0 - 11
Y1	Young 1	11 - 15
Y2	Young 2	15 - 18/20
Y	Young	11 - 18/20
A1	Adult 1	18/20 - 30
A2	Adult 2	30 - 40
A3	Adult 3	40 - 60
A4	Adult 4	60 +
A	Adult	18/20 +

Table. The applied age groupings (by author).

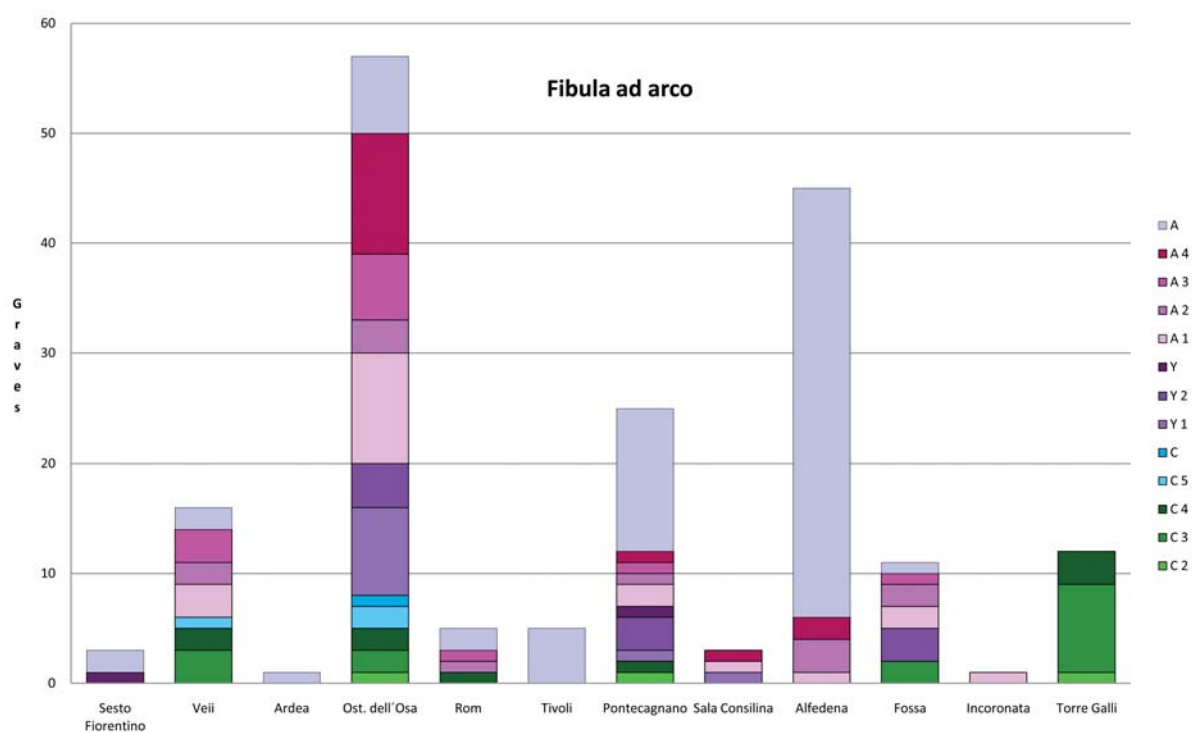


Fig. 9. Distribution of fibule ad arco in regard to age (diagram Kees van der Veer).

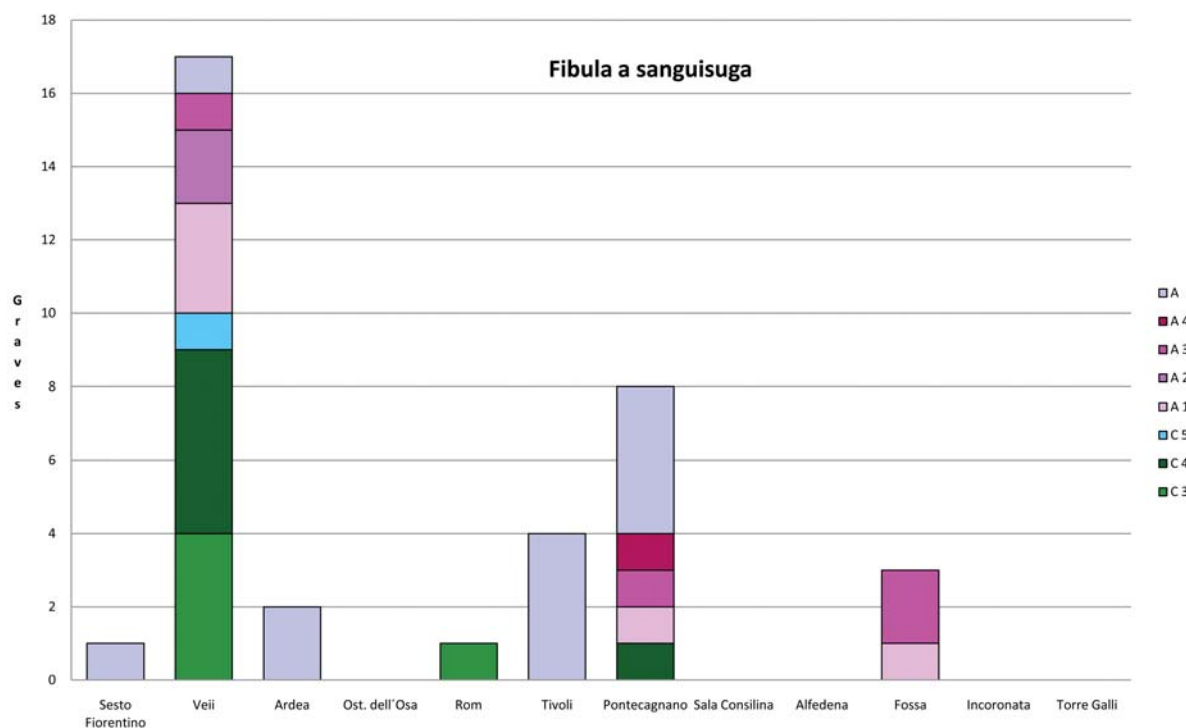


Fig. 10. Distribution of fibule a sanguisuga in regard to age (diagram Kees van der Veer).

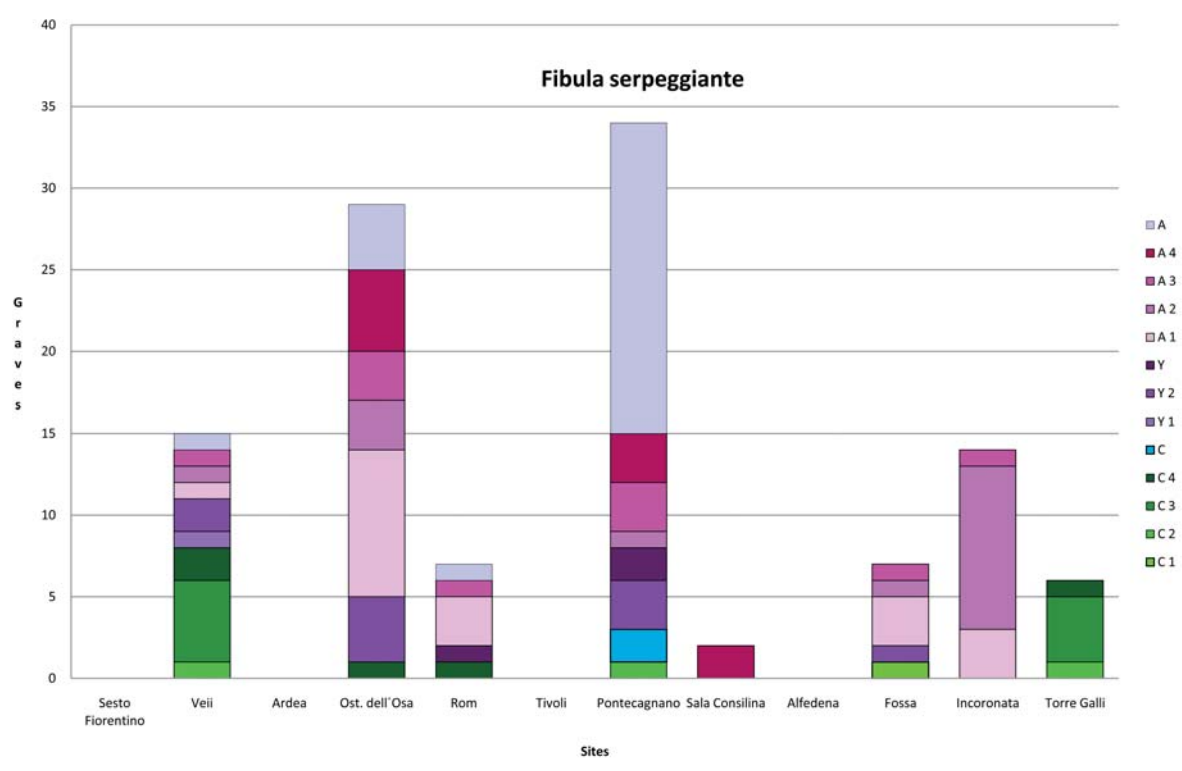


Fig. 11. Distribution of fibule serpeggianti in regard to age (diagram Kees van der Veer).

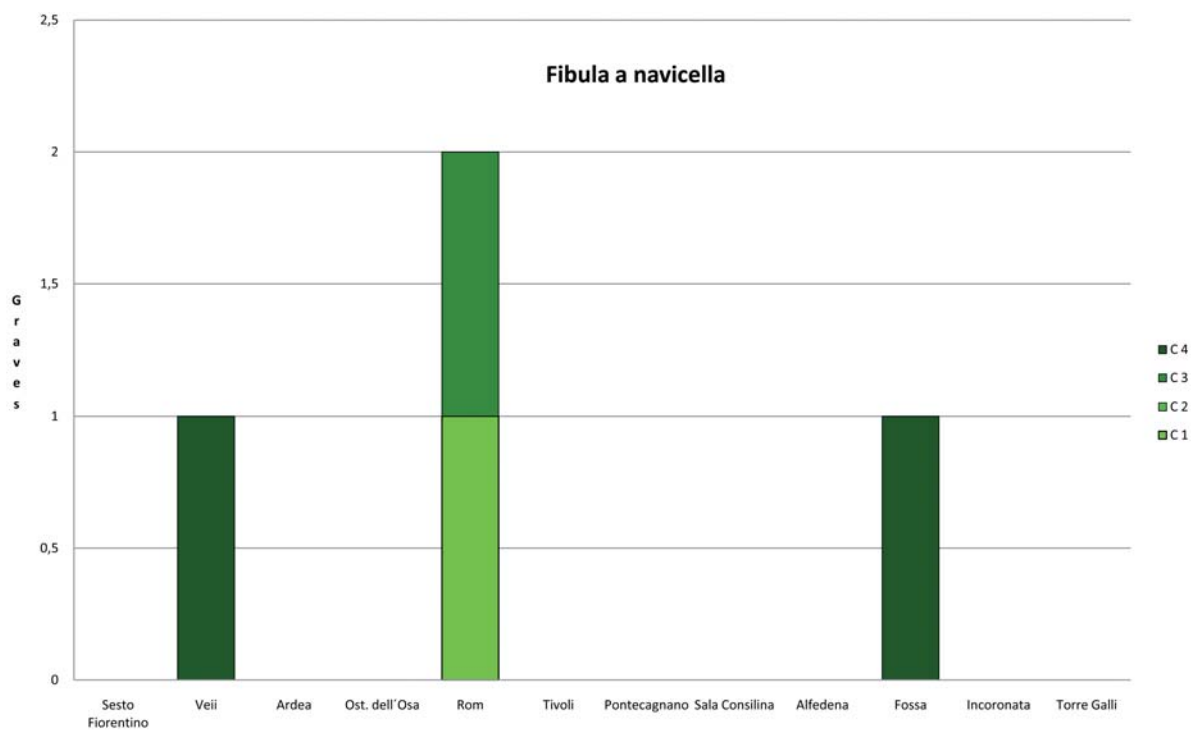


Fig. 12. Distribution of fibule a navicella in regard to age (diagram Kees van der Veer).

According to the analysis, fibula types do not appear to be related to age, with the possible exceptions of *fibule serpeggianti*, which, in Osteria dell'Osa, are almost exclusively found in graves containing adults, and the *fibula a navicella*, which is rare, but appears to be restricted to children. To conclude, sex seems to be a more important factor with regard to the deposition of fibulas in graves.

Considering the number of fibulas per burial, most necropolises appear to follow a certain norm, which varies from site to site (often 1-2 fibulas in each grave). In general, there does not seem to be any obvious correlation between number, age or sex. However, there are a few exceptions to this. In Etruria the *fibule serpeggianti* are usually deposited singularly, but, here, one grave for an adult of unknown sex contains two (LL12-13). In Osteria dell'Osa *fibule ad arco* usually appear in numbers of one or two, but one young adult (Y1), possibly a female, of 14-15 years is buried with four (grave 429). Thus, some individuals are buried with an unusual number of fibulas in comparison with other burials in the same necropolis.

It is of further interest that, at many sites, *fibule serpeggianti* are deposited singularly and without any other fibula types.<sup>51</sup> On the contrary, *fibule ad arco* are deposited in numbers from one to ten and also with other fibula types such as *a sanguisuga*.

Furthermore, the mixture of fibula types in the individual grave differs from site to site. At some sites, e.g. Osteria dell'Osa, *fibule ad arco* and *serpeggianti* never occur in the same grave. But, at most other sites, occasional combinations of *fibule ad arco* and *a sanguisuga* and of *ad arco* and *serpeggianti* occur. Combinations of the latter types occur at Veii, Pontecagnano, Sala Consilina, Fossa, Incoronata and Torre Galli. In many cases, the graves with both types belong to adult females. In the children's graves at Torre Galli, the occurrence of *fibule ad arco* and *serpeggianti* in the same grave is common. This is, however, not restricted to children's graves, but also includes graves containing adult individuals of unknown sex.

#### *Fibulas and dress*

It is known that the different fibula types were used to fasten, or simply just adorn, the garments and were thus part of the attire.<sup>52</sup> While there is still a debate among archaeologists about the specific way fibulas were worn, they tend to agree that fibulas belonged to the outer layer of clothing.<sup>53</sup> As already mentioned, sex is often considered the most important trait in the choice of dress, and it has

long been accepted, but never demonstrated, that e.g. *fibule ad arco* were part of female dress.<sup>54</sup> This assumption is not supported by the deposition of fibulas in the graves since men and women were often buried with the same fibula types and with the same number of fibulas. The fibulas alone do therefore not allow us to deduce that men and women were necessarily dressed differently.

Adults, including elders, were buried with the same type and number of fibulas, and no distinction among age groups is possible. Children, on the other hand, occasionally appear to have been treated differently. For example, *fibule a navicella* were only deposited with children on the sites treated here. Children received a mix of different fibula types and occasionally an unusually high number of fibulas. Furthermore, at Osteria dell'Osa children were rarely buried with *fibule serpeggianti*.

Perhaps this indicates a different garment for children or that their garments were worn in a different way. As for elders, there is nothing in the studied material to indicate that they were dressed any differently from younger adults.

But to what degree do these fibulas actually reflect the dress of the deceased? Fibulas are just a detail of the dress, and perhaps the type is not even of utmost importance. To gain greater knowledge of garments and dress in early societies in Italy, and to understand if they were related to sex or age, it is necessary to include further evidence such as preserved textiles and iconography.

#### OTHER ARCHAEOLOGICAL EVIDENCE

##### *Preserved textiles*

Only in rare instances do we recover preserved textiles which can contribute to our knowledge of how people were dressed in the Iron Age.<sup>55</sup> One of these instances is grave 89, the so-called Tomba del Trono, at Verucchio, where nearly complete garments belonging to the Villanovan period were found. In the grave, which belongs to an adult male,<sup>56</sup> more than 160 textile fragments have been recovered. Moreover, two rounded mantles in fine wool, originally dyed red with blue borders, were used to cover the urn.<sup>57</sup> Twenty-six well-preserved fibulas and eight fragments of the types *serpeggiante*, *a drago* or *a sanguisuga* were recovered from the grave,<sup>58</sup> but it is not possible to tell whether certain fibulas were connected with certain textiles or garments. Yet, one of the mantles has holes that could possibly have come from a specific *fibula serpeggiante* found in the grave.<sup>59</sup>



Another grave in Verucchio (B/1971), dated to end of the 8<sup>th</sup> century or the beginning of the 7<sup>th</sup> century BC, has revealed a woollen mantle in two parts. It is dyed blue and has a rectangular shape.<sup>60</sup> From the grave were recovered amber beads and several fibulas, among these *fibule serpeggianti*.<sup>61</sup> Furthermore, preserved textiles, mostly consisting of minor fragments, have been found in several graves e.g. at Verucchio, La Rocca Malatestiana.<sup>62</sup>

In a grave in Central Italy in Chianciano, Poggio alla Sala (7<sup>th</sup> century BC), a purple woollen mantle was recovered wrapped around an urn. According to anthropological examinations, the grave belongs to a male of around 30 years of age. Unfortunately, no fibulas were recovered.<sup>63</sup> Several more textile finds from Italy are known of which M. Gleba has compiled an extensive list.<sup>64</sup> By far the majority are preserved with metal objects and often only as traces on the metal surfaces. Therefore, these remains might provide us with information about the kind of material used, but not necessarily about the type of garment to which they belonged. However, it could be interesting to investigate whether there is any correlation between certain types of textiles and fibula types.<sup>65</sup>

There is thus little evidence for how people in the Iron Age were dressed, based on the textiles, since their fragmentary condition makes it difficult to identify certain garments.<sup>66</sup> The evidence at hand primarily consists of mantles in coloured wool in red, purple, orange, yellow, brown and blue.<sup>67</sup> However, it is not possible to relate these clothing articles to either men or women, nor to age groupings. In addition, these textile finds reflect a bias since the bulk has been recovered from the graves of usually very wealthy individuals belonging to the upper classes of society.<sup>68</sup> Especially the purple mantles appear to have been connected with the elevated status of the wearer.<sup>69</sup> The royal status of such garments is further indicated by Dionysius of Halicarnassus, who mentions a purple-coloured mantle similar to the ones worn by Lydian and Phrygian kings given to Lucius Tarquinius (king of Rome 616-578).<sup>70</sup> It is further possible that some of the garments from the wealthy graves were imported, and therefore do not necessarily reflect how people in local societies in Italy were dressed.<sup>71</sup> As an example, some of the textiles from Verucchio tomb 89 were made with techniques primarily known from the Middle East and Egypt.<sup>72</sup>

#### *Placement of the fibulas and other personal ornaments*

Despite the fact that few textiles have been pre-



Fig. 13. Female torso from Capestrano (© Museo Archeologico Nazionale di Chieti).

served, the graves still contribute considerably to our knowledge and understanding of dress. Not just the mere presence of fibulas, but also their placement in the grave with regard to inhumations contributes information even though it is, of course, possible that they might have shifted after the burial. In many graves, fibulas are found in pairs, in inhumation graves often near the shoulders, which have led to the interpretation that they were fasteners for the garments at the shoulders or on the chest.<sup>73</sup> As an example, the large fibulas found in graves e.g. at Monteprandone (9<sup>th</sup> century BC) have been interpreted as a sign of the deceased wearing a mantle.<sup>74</sup> This is supported by iconographic depictions, as for example the stone torso from Capestrano, Picenum, on which two fibulas are depicted, one by each shoulder (fig. 13). However, fibulas are also recorded as being placed at many other positions on the body, such as the chest, the pelvis etc. At Osteria dell'Osa the fibulas are usually placed on the chest or stomach region in both male and female graves.

Different forms of adornment can also contribute to our knowledge of dress since several objects, e.g. bronze buttons, rings, beads and small metal plaques, were sewn on to garments of textiles or leather, which have disappeared today.<sup>75</sup> For example in the Isis tomb in the Polledrara necropolis in Vulci (7<sup>th</sup> century BC), beads have been recovered with threads still attached.<sup>76</sup> On the other hand, small bronze rings have, in some instances, formed chains attached to the garment or as pendants on fibulas.

In the majority of cases, the placement of the ornaments in the graves is consistent. Many schol-

ars are therefore of the opinion that, as a rule, they were placed in accordance with their function.<sup>77</sup> This is used as an argument for the possibility of tracing the garments through the placement of the ornaments when they are found *in situ* in the graves allowing the ornaments to contribute to a partial reconstruction of the original garments.<sup>78</sup> As an example, rows of rings or buttons have been found in graves, which may be an indication of their attachment to the borders of the garment. Scholars have thus tried to reconstruct garments from the objects located on and around the skeleton. For example, T. Cinquantaquattro has reconstructed a female costume, based on the decorative ornaments present in an Iron Age burial at Pontecagnano (*fig. 14*). According to her reconstructions, the individual in grave 4891 wore a dress fastened at the shoulders by two fibulas, and a mantle closed by several fibulas, which were recovered on the chest and pelvis of the deceased.<sup>79</sup> Furthermore, the dress was adorned with small bronze rings and buttons sewn onto the fabric. These ornaments were recovered in the entire area between the shoulders and legs. Finally, she reconstructs a belt composed of amber beads and pendants.<sup>80</sup>

L. Bentini and A. Boiardi have reconstructed female costumes based on evidence from burials at Verucchio. These reconstructions show that costumes of adults, young individuals and children are quite similar, especially with regard to the type and placement of the fibulas (*figs 15-18*). Other ornaments appear to be reserved for certain age groups, e.g. bracelets are buried with children and young individuals.

Ornaments in bronze have, in general, been interpreted as belonging to female garments,<sup>81</sup> and it has been proposed that dresses covered with very high numbers of amber and glass beads may have been female wedding dresses, which the women wore after death.<sup>82</sup> The common opinion is that men did not wear such embellished garments. By a collocation of the material in the graves treated in this study, it is apparent that pearls and buttons occur in female graves far more often than in male graves. Yet, it is not possible to conclude that the ornaments are strictly female since they also occur with males. It has thus been suggested that men wore a simpler and less ornamented attire compared to women. But this is not an undisputed theory as men's clothes might have been embellished with perishable materials.<sup>83</sup> Presence and placement of these ornaments are thus a useful method to gain greater knowledge of the garments that people may have



*Fig. 14. Graphic reconstruction of the costume of the deceased from grave 4891 at Pontecagnano, località Casella (Cinquantaquattro 2001, 70, fig. 28).*

worn in the Iron Age, but they should not be used to distinguish between men and women.

#### *Factors of uncertainty connected with the grave ritual*

Caution must be exercised when assessing evidence from mortuary contexts as it is complicated to determine whether the garments and the personal ornaments in the grave reproduce how the deceased was dressed when alive, or whether they reflect specific burial rituals. As an example, according to Peroni, fibulas with attached rings found in graves e.g. at Allumiere were not worn in this way by the living, but were a special form of ornament for burial use. When alive, the indi-

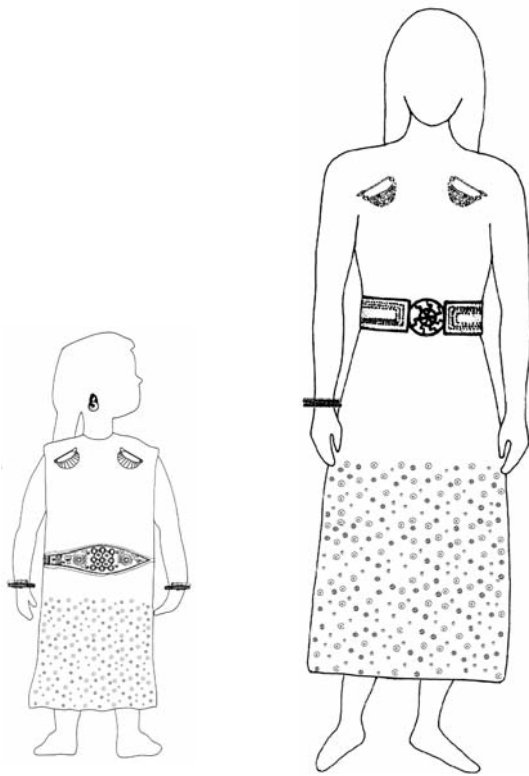


Fig. 15. Graphic reconstruction of the costume of a female child from Verucchio (Bentini/Boiardi 2007, 136, fig. 16).

Fig. 16. Graphic reconstruction of the costume of a young female from Verucchio (Bentini/Boiardi 2007, 136, fig. 15).

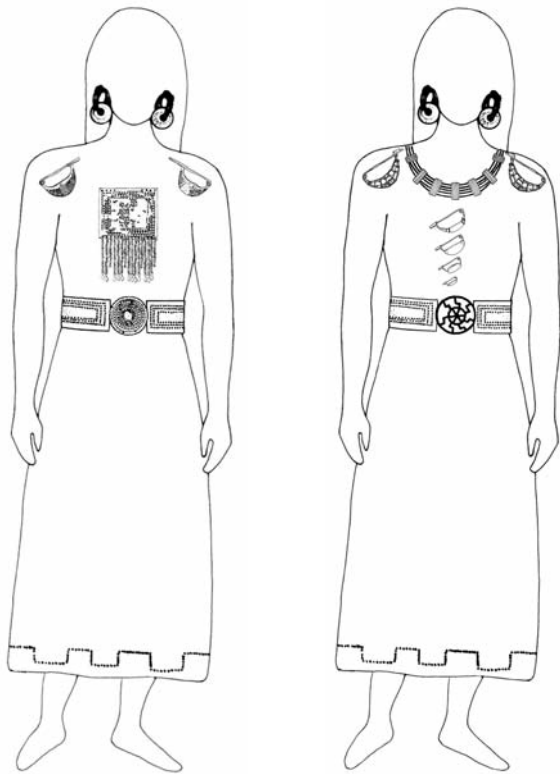


Fig. 17. Graphic reconstruction of adult female costume from Verucchio (Bentini/Boiardi 2007, 135, fig. 13).

Fig. 18. Graphic reconstruction of adult female costume from Verucchio (Bentini/Boiardi 2007, 135, fig. 14).

vidual would have carried the rings on his/her fingers.<sup>84</sup>

Certain reservations with regard to interpretations based on the placement of fibulas in the graves should also be maintained since the garments may have been special shrouds and may not necessarily reflect types of dress used when the person was alive. The assumption that the fibulas may have been used for the wrapping of shrouds is supported by the finds in cremation graves, where the fibulas were occasionally used to 'dress' the urn (fig. 19). These dressings often incorporate a high number of ornaments and fibulas which belong to different rituals: the dressing of the deceased for the cremation, the dressing of the urn, and, possibly, of the *dolium*.<sup>85</sup> The fibulas belonging to the dress of the deceased are probably the ones positioned in the urn, since they also often show traces of fire, albeit nothing can be said of



Fig. 19. Graphic reconstruction of a 'dressed' urn (Bentini/Boiardi 2007, 127, fig. 1).



the type of dress worn.<sup>86</sup> In cremation graves, a high number of fibulas, especially outside the urn, can thus be indications of one or more dressings. This could also be the case for inhumation graves, where an unusual high number of fibulas might indicate an extra dressing of the deceased, e.g. a shroud.

Consequently, it is difficult or even impossible to know if the dress of the deceased was worn as represented in the grave, or if it was created solely for the purpose of burial. However, Negróni Catacchio has proposed that special luxurious garments used for weddings or other important ceremonies were kept and used for burial. Accordingly, funeral garments were not very different from dress worn in real life on special occasions.<sup>87</sup> It is also possible that the garments were given as an offering to the deceased.<sup>88</sup> This is, of course, also possible with regard to the fibulas. Fibulas that carry inscriptions may be used in support of this argument. As an example, a gold fibula a drago from Castelluccio di Pienza (Siena), dated to the second half of the 7<sup>th</sup> century BC, carries the inscription: *mi arathia velavesnas zamathi mamurke mulvenike tursikina* (I (am) the golden fibula (?) of Arath Valavesna. Mamurke Tursikina has donated (me)).<sup>89</sup> Cerements are therefore potentially a greater source for the structural ideals in society than for the actual lives and customs of dressing of the deceased.<sup>90</sup> Textile research can, however, shed light on this area. This is e.g. the case in tomb 89 at Verucchio, where the recovered textiles (mantles) show signs of wear - they were thus not made exclusively for use in the burial ritual.<sup>91</sup> Furthermore, fibulas from Osteria dell'Osa show signs of wear and repair, which is an indication of their use over a period of time. There are thus aspects that speak in favour of the cerements sharing elements with garments actually worn in life.<sup>92</sup> Yet, it is generally unclear to what extent grave goods and rites represent the personal and individual identity of the deceased, and whether they are determined by family or kinship groups.<sup>93</sup> The selection of grave goods was possibly determined by important objects, owned by the deceased, but it was also largely determined by conventions and by what was necessary in connection with the burial rituals.<sup>94</sup>

#### ICONOGRAPHICAL EVIDENCE OF DRESS AND BIOLOGICAL SEX

We do not have much knowledge of how people were dressed in early Iron Age Italy based on the preserved monuments from the period, as only



Fig. 20. Seated statuette from the Tomb of the Five Chairs, Cerveteri, ca 650-600 BC, painted terracotta (© Trustees of the British Museum).

very few depictions of garments from the 8<sup>th</sup>-7<sup>th</sup> centuries BC exist.<sup>95</sup> Based on these, it is difficult to identify exactly how the clothes looked, and especially to distinguish differences in detail between the respective garments, since many traits are rendered only very summarily.<sup>96</sup> Often depictions from later periods are therefore used to define or describe clothes in the Early Iron Age and Orientalising periods,<sup>97</sup> which is, of course, prob-





Fig. 21. Cinerary urn with figure dressed in long tunic and back mantle on the lid, Chiusi. Mid-7<sup>th</sup> century BC (Haynes 2000, 81).

lematic in itself as dress worn by certain populations varies through time and space.<sup>98</sup> Thus, what is true in one context might not be so in another.

Already from the late 7<sup>th</sup> century BC, a vast corpus of informative visual material exists, e.g. in the form of painted tombs, pottery, figurines, and statuary.<sup>99</sup> The terracotta statues from *Tomba delle cinque sedie* at Cerveteri are among the material often used as the basis for reconstructions and interpretations of dress and garments (fig. 20).<sup>100</sup> The figures wear short-sleeved tunics and diagonally draped mantles of chequered material with remains of red paint. On the right shoulders the mantles are fastened by *affibbiaglio a pettine* (comb fibulas), a type found in burials from the second quarter of the 7<sup>th</sup> century BC.<sup>101</sup> The five statues are interpreted as three men and two women, the latter identified by their earrings.<sup>102</sup> Many scholars today believe that the female heads do not belong to the bodies, which are instead believed to be male based on the comb fibulas, which are interpreted as restricted to men.<sup>103</sup> Similar long tunics and diagonally draped mantles are depicted

on the two enthroned figures in the antechamber of *Tomba delle statue* at Ceri.<sup>104</sup>

Another garment known from iconography is the so-called 'back mantle', which is represented on many figures from the 7<sup>th</sup> century BC, for example crowning cinerary urns from Chiusi (fig. 21), but also on e.g. bucchero statuettes. It consisted of a long, rectangular piece of heavy wool, fastened at the shoulders so that it hung straight along the back.<sup>105</sup> This type of mantle is considered female due to its combination with long tunic, earrings and the back braid (see below).<sup>106</sup> A second type of mantle, also from the 7<sup>th</sup> century BC, is a cape, by L. Bonfante termed a 'raincoat', with holes for the arms in front and often pulled over the head.<sup>107</sup> The act of draping the mantle over the head appears, in general, to be considered a female trait.<sup>108</sup> The female torso from Capestrano, Picenum depicts a different type of garment (fig. 13). The figure wears a waistcoat with short sleeves, which covers the chest/bosom and stops above the waist. The upper and lower borders and the sleeves are decorated with a red band. The waistcoat is held up by two large *fibule serpeggianti* (!), one at each shoulder, with attached pendants.<sup>109</sup> Finally, loin-cloths are depicted on several figures as, for example, the Capestrano warrior (fig. 22).<sup>110</sup> The loin-cloth is typically considered a male costume,<sup>111</sup> but it is also worn by female figures.<sup>112</sup> In terms of material, chequered garments are depicted on both male and female figures.

Iconography thus provides evidence for different ways of dressing, and, according to Bonfante, the long tunics, the mantles and the loin-cloth were worn in real life.<sup>113</sup> Especially the long tunic and the mantle are among the most common garments depicted in early representations. The tunic appeared in different lengths, but the earliest depictions render it long, until the ankles for both men and women.

Iconographic representations have often been put forward as evidence that the biological sexes dressed differently (for example the long tunic and mantles covering the head as female, the short tunic, the diagonally draped mantle and the loin-cloth as male). This is problematic since the use of these depictions involves a high degree of both conscious and subconscious interpretation. As an example, we cannot necessarily conclude that a person is a woman just because the person in question wears a long garment as such an interpretation is based on a traditional western differentiation between the sexes, which may not necessarily be applicable in the study of prehistoric periods.<sup>114</sup> As shown above, it appears that male figures could



Fig. 22. The Capestrano warrior, 6<sup>th</sup> century BC  
(© Museo Archeologico Nazionale di Chieti).

also wear long garments. We can therefore not take it for granted that present 'gender icons' existed in the Iron Age, an act which J. Robb terms 'the trousers and skirt phenomenon'.<sup>115</sup> This does not only apply to the length of garments. It should also be questioned if the presence or absence of, for example, earrings or certain fibulas is sufficient to identify a figure (or the deceased in the grave) as either male or female. Thus, we are again in danger of being trapped in circular arguments of what makes e.g. a garment male or female. As a result, we occasionally encounter examples of misinterpretations and confusion when it comes to identification of sex. One such example is the sculptures in the pediment of the Siphnian Treasury at Delphi. The heavily clad figure in the midst has earlier been interpreted as Athena. The head is missing, but the figure has long hair and wears a long chiton down to the ankles. It has now been proven that the figure in question is not Athena, it is not even a woman, but, on the contrary, Zeus.<sup>116</sup> Also the Capestrano warrior has been ambiguously sexed due to the figure's quite peculiar proportions with very wide heavy hips (fig. 22).<sup>117</sup>

Hairstyles are also often perceived as part of dress and visual identity, and certain coiffures have been associated with certain sexes, e.g. the long braid is considered female.<sup>118</sup> Therefore, *fermatrecce*, which have been interpreted as a sort of hairclip for the braids, are regarded as female grave goods.<sup>119</sup> Yet, hairstyle is rarely a reliable indicator of sex, and there are examples of male figures with braids, e.g. the Sardinian bronze figurine from the Cavalupo necropolis at Vulci with long braids hanging over chest and back (fig. 23).<sup>120</sup> The figurine wears a belted skirt and a tall pointed hat and holds a large shield. It has been interpreted as a male either a chieftain-priest or a warrior<sup>121</sup> even though skirt and braids are usually considered female. It is therefore important to be aware of the premises on which we base our attributions of archaeological representations. As Bonfante writes: '(...) time constantly transforms the meaning of a human image, and how our own acceptance of their significance depends on assumptions rooted in our own experiences, expectations, and emotional reactions, and those of the world in which we live.'<sup>122</sup> The goal is, however, not necessarily to argue against interpreting whether a figure represents a man or a woman, but just to emphasise that an approach which employs a simple binary pattern of interpretation will disguise potential divergences. A male wearing 'female' attire will thus be identified as a woman and vice versa. If multiple gen-





Fig. 23. Sardinian bronze figurine from the Cavalupo necropolis at Vulci (©Museo Etrusco di Villa Giulia, villagiulia@arti.beniculturali.it).

der roles or transvestism occurred in e.g. the Iron Age, it will not be visible in our research. The possibility of transvestism is maybe not unlikely since ethnographic contexts show that transvestism can be a culturally accepted praxis.<sup>123</sup>

Some garments might also have been worn by both sexes, as it was the case for e.g. the toga which was not per se a manly garment.<sup>124</sup> Furthermore, we risk using circular arguments since dress is often based on iconographical representations which again are based on identification via doubtful methods.<sup>125</sup> The visual representations

might therefore offer a picture of the manners in which people dressed, but the social reality was probably more nuanced than these representations suggest. Depictions are not necessarily 'windows to the past', and they may tell us more about the constructs of gender roles and relations between the sexes<sup>126</sup> than about the way in which men and women dressed.

With regard to the relation between iconography and fibulas, the diagonally draped mantle seems to have been fastened by one fibula on the right shoulder, while the back mantle was fastened by two fibulas, one on each shoulder. In collocation with the grave material studied here, i.e. the fibulas, it seems possible that the diagonally draped mantle was worn with a certain type of fibula. This is supported by the evidence from the graves where the *fibule serpeggianti* are mostly deposited singularly and in the inhumation burials, often by one shoulder. Since it has been shown that this type was not necessarily reserved for a certain sex, it seems likely that, on some sites, it was connected to the diagonally draped mantle. As *fibule ad arco* were often deposited in multiples, and/or with other fibula types such as a *sanguisuga*, it is possible that, on some sites, these were related to the back mantle, which was fastened by two fibulas.

#### ICONOGRAPHICAL EVIDENCE OF DRESS AND AGE

Regarding the representation of age groups, iconography appears to depict adults while no examples of children or elderly are known from the prehistoric periods. Especially elderly seem invisible. The earliest Italian example of a representation of old individuals is a Campana plaque from the Banditaccia necropolis at Cerveteri dated to ca 550-525 BC (fig. 24).<sup>127</sup> The plaque depicts two seated old men with bald pates, white hair and beards. They both wear long chitons, mantles and pointy boots. It has been questioned whether these men represent humans or possibly gods or mythological figures.<sup>128</sup> In addition, the plaque belongs to a period which, like the rich corpus of wall paintings from the Archaic period, was heavily inspired by Greek style and tradition,<sup>129</sup> and thus it cannot be used as a reliable source as to how elderly persons were dressed in the Iron Age.

Children are equally rare in early iconography, and they do not appear in Iron Age depictions although it has been proposed that the diminutive human figures on the Verucchio throne could be children.<sup>130</sup> A much later example of a possible representation of a child is in the wall paintings



Fig. 24. Campana plaque from Cerveteri with two old men seated on folding chairs, third quarter of the 6<sup>th</sup> century BC (Steingraber, 2006, 63).

in the François tomb at Vulci dated to the transition between the late classical and the Hellenistic periods.<sup>131</sup> Next to the owner of the tomb, Vel Saties,<sup>132</sup> a kneeling person is depicted, by some interpreted as a child at play with a pet (fig. 25).<sup>133</sup> The kneeling person is dressed in a white tunic with short sleeves and coloured borders similar to garments worn by adults in other tomb paintings. A wall painting from tomb 5636 at Tarquinia dated to the second half of the 3<sup>rd</sup> century BC shows a depiction of three men and a child discernable due to the small size of the figure (fig. 26).<sup>134</sup> The child wears a white toga equal to the ones worn by the adults. A similar depiction of a child, also dressed like an adult, is seen in the procession wall painting in Tomba Bruschi in Tarquinia.<sup>135</sup> However, this evidence should be treated carefully since hierarchical scale might be employed.

In Roman iconography, children are usually dressed as small adults, e.g. on monuments such



Fig. 25. Wall painting from the 'atrium' in the François tomb at Vulci. Detail of Vel Saties wearing a wreath and ceremonial attire, and next to him a kneeling person with a bird (Steingraber, 2006, 184).

as Ara Pacis, but also on sarcophagi, statues, mosaics etc. It is possible that this was also the situation in Iron Age Italy, but since early iconographical evidence is non-existent, our knowledge of dress and garments is, to a higher degree, dependent on the archaeological material. If, indeed, fibulas can indicate certain types of garments, it appears that the situation in Iron Age Italy might differ from the later periods seeing that children (on some sites) were deposited with a different number, combination and type of fibulas, and thus not dressed as small adults.

#### CONCLUSION

Different fibula types have traditionally been used as indicators of biological sex, but as shown by the above analysis fibulas are poor indicators of specific aspects of identity since the analysed fibula types occurred with both sexes and in most age groups. In general, fibulas therefore cannot provide any information about the age of the deceased although, at some sites, they may correlate with biological sex. Thus, it cannot be assumed a priori that a certain fibula type corresponds to a certain sex.





Fig. 26. Wall painting from Tomba 5636 at Tarquinia. Second half of the 3<sup>rd</sup> century BC (Steingraber, 2006, 262).

Interestingly, there are several examples of graves containing both *fibulae ad arco* and *serpegianti*, which should not be possible according to the traditional perception of fibulas as indicators of biological sex.<sup>136</sup> It is of further interest that four out of the five adult graves with both fibula types are female (the remaining being of unknown sex). This could indicate that it was more common for women to wear a 'male' fibula than vice versa. It is therefore wrong simply to assume that men were dressed differently from women based on these items as the analysis shows distinct variations in the deposition of fibulas in the graves. It is further possible that, on some sites, these fibula types were 'gender-less' and not exclusively worn by either men or women. Or perhaps fibula types were not related to biological sex but to gender role or possibly to a particular status of the deceased<sup>137</sup> since the absence of fibulas in some burials might suggest that access to them was also dependent on status.<sup>138</sup>

With regard to their usability as indicators of dress in the Iron Age, some information might be extracted from their placement on the body, which has been perceived as a sign of their use as fasteners for mantles. In addition, the applied ornaments on the garments testify to the type of garment and its decoration. Despite the few preserved textiles, they show us that woollen, coloured man-

tles were worn, probably by both sexes. Thus, the grave material indicates that both sexes and adults in all age groups seem to have worn a sort of garment often fastened by the same types of fibulas. These garments were probably woollen mantles in different colours, and a sort of tunic with a variable length sometimes adorned with bronze ornaments. Despite the problematic character of the iconographical evidence, it seems to support the conclusions drawn from the grave goods. The different representations show especially long tunics and mantles either draped diagonally or in the form of back mantles. As shown, it is possible that the fibulas were related to a certain garment such as the fibula *serpeggiante* and the diagonally draped mantle.<sup>139</sup> This is further supported by the mantle fastened with one *fibula serpeggiante* from tomb 89 at Verucchio.

We thus have some knowledge about Iron Age dress, but we are still far from a full understanding of how men, women, children and elders were dressed. However, we are one step closer since this study has shown that aspects such as sex and age were not necessarily the primary identities to be represented in dress/garments. Fibulas may, instead, be infused with multiple meanings. It still remains open whether this reflects that men and women, children and elders were not dressed differently and whether dress

was, instead, dependent on other aspects of identities such as gender roles, tasks (e.g. warrior, textile worker etc.), status, ethnicity or other. This underlines the importance of combining different types of evidence such as fibulas, dress ornaments, textiles and iconography, and the continuation of interdisciplinary studies where especially anthropological examinations and textile research can be of decisive importance.

The results of this study indicate that we cannot equate the archaeological evidence of dress with sex or age. This contradicts the majority of mortuary analyses in which it is assumed that a person's outer appearance indicates not just sex, but also gender role, since this assumption is disturbed in case of transvestism or multivestism, irrespective of male to female, female to male or inter sex to male or female. Identity via the preserved remains of appearance alone is therefore not useful for identifying either biological sex or age. Dress can instead inform us of a possible pattern of gender roles. Even though dress is not the only way gender roles are expressed, it is among the most visible ways for gender identity to be manifested in relation to biological sex.<sup>140</sup> In addition, archaeologists have tended to envision identity as a single variable, when, in fact, an individual negotiates a multiplicity of identities, which might be in conflict with each other,<sup>141</sup> which, in turn, might explain the occurrence of a 'wrong' fibula in a burial. The human life course thus moves the body through many identities,<sup>142</sup> but the common perception of identity among scholars is often very static. Regarding the study of grave material and dress, it is therefore necessary to employ a more comprehensive approach which takes these multiple identities into account.

## NOTES

\* I am very grateful to Lone Wriedt Sørensen, Annette Rathje, Kristina Winther Jacobsen and Nora Petersen for their comments on earlier drafts of this paper. Of course, any errors or misunderstandings are entirely my own. I am also very grateful to Peter Dyrby, who has been so kind as to revise the English text. I would also like to give my sincere thanks to the Accademia di Danimarca and Munksgaard Fonden for funding the work and publication of this article. Finally, I would like to thank Patrizia von Eles, who has been most kind and helpful in providing photographic material of several figures, and the Museo Archeologico di Chieti, which provided me with excellent images of the Capestrano warrior and the female torso. Furthermore, thanks are due to Laura Bentini, Angiola Boiardi, Judith Toms, Teresa Cinquantaquattro and Stephan Steingräber, all of whom have been so kind as to let me reproduce images from their publications.

<sup>1</sup> Iaia 2007a, 25.

<sup>2</sup> Cogle 2009, 6; Colburn/Heyn 2008, 6; Arnold 2002, 241.

<sup>3</sup> The separation of biological sex and gender is generally agreed upon, and societies react differently to the two (Stig Sørensen 2000, 59). Therefore, I employ a distinction between the two. I use the terms (biological) sex and gender roles, as introduced by Money et al. 1955, to clarify that the anthropological determinations illustrate sex, not gender. I am aware that the use of a two-sex model is not without pitfalls since it will leave out e.g. intersexed individuals, i.e. individuals with chromosomal combinations distinct from XX and XY, as well as with a disjunction between their chromosomal (or genotypic) sex and phenotypic sex (Geller 2005, 601). Since the investigation is based on examinations already carried out by anthropologists, who only employed a binary categorization of male and female biological sex, the study will be focused on the two.

<sup>4</sup> There are different 'kinds' of age: Physiological/biological age, chronological age (the time elapsed from birth) and social age (socially constructed norms of appropriate behaviour for a certain age group) Gowland 2006, 143. In this study, the focus is on physiological/biological age, which is detectable in the skeletons.

<sup>5</sup> Stig Sørensen 2000, 89.

<sup>6</sup> Gowland 2006, 147.

<sup>7</sup> Hencken 1968, 31.

<sup>8</sup> Cianferoni 2007, 97. For further examples of gender divisions of artefacts at Italian necropolises, see also e.g. Gastaldi 1993, 344; Bartoloni 2007, 14; 2000, 273. The gendering of fibulas is also emphasised by Cygielman (2003, 68, 70), who considers *fibule a drago* as male artefacts.

<sup>9</sup> Toms 1998, 159.

<sup>10</sup> Bergonzi/Von Eles 1988, 340.

<sup>11</sup> Weglian 2001, 151.

<sup>12</sup> Gowland 2006, 145.

<sup>13</sup> Gowland 2001, 152.

<sup>14</sup> For infanticide see e.g. Mays 2000.

<sup>15</sup> For studies of children in archaeology, see e.g. Sofaer Derevenski 2000; Baxter 2005.

<sup>16</sup> For the method of sex and age determinations of skeletons, see Mays 1998; Lynnerup et al. 2008.

<sup>17</sup> Bietti Sestieri et al. 1997, 260.

<sup>18</sup> Lynnerup et al. 2008, 138.

<sup>19</sup> Salvini 2007.

<sup>20</sup> Veii 1963, 1965, 1967.

<sup>21</sup> Crescenzi/Tortorici 1983; 1993; Rubini et al. 1992; Rubini/Mallegni 1996-1997.

<sup>22</sup> Gjerstad 1956; De Santis/Mieli 2008.

<sup>23</sup> Facenna/Fugazzola Delpino 1976.

<sup>24</sup> Bietti Sestieri 1992.

<sup>25</sup> Gastaldi 1998; De Natale 1992; D'Agostino/Gastaldi 1988.

<sup>26</sup> Trucco 1987. I am very grateful to Flavia Trucco, who was so kind as to let me access her impressive work on Sala Consilina.

<sup>27</sup> Badoni/Giove 1980; Coppa et al. 1981.

<sup>28</sup> Cosentino et al. 2001.

<sup>29</sup> Pacciarelli 1999.

<sup>30</sup> Chiartano 1994.

<sup>31</sup> Toms 2000, 92.

<sup>32</sup> Five, if the composite fibula is considered as a separate category.

<sup>33</sup> Toms 2000, 91.

<sup>34</sup> Bietti Sestieri/Macnamara 2007, 16.

- These are specified in the tables.
- Bietti Sestieri/Macnamara 2007, 18.
- Bietti Sestieri/Macnamara 2007, 17.
- Osteria dell'Osa, Rome, Sala Consilina, Alfedena and Incoronata.
- e.g. Vida Navarro 1992, albeit the author is aware that some graves exist, which do not fit this pattern, e.g. grave 297, which contains a fibula serpeggiante and a spindle whorl. Vida Navarro 1992, 83-84.
- Pacciarelli 2007, 117.
- Pacciarelli 2007, 120.
- E.g. San Marzano. D'Agostino 1970, 578.
- Toms 1998, 170.
- Toms 1998, 167.
- Amann 2000, 33.
- Iaia 1995, 250. See also Brøns, forthcoming.
- Vallois 1960, 194.
- Baxter 2005, 102.
- Cuozzo 2003, 77-78.
- Lynnerup et al. 2008, 70-71.
- E.g. at Pontecagnano (with the exception of one grave belonging to a child), Veii, Rome and Osteria dell'Osa. Iaia 2007b, 521.
- Curta 2005, 132.
- This also applies to later periods and other geographical regions in Europe. See e.g. Curta 2005, 126.
- E.g. Stauffer 2002, 192-215; Ræder Knudsen 2002, 220-225.
- Onisto 2002, 287.
- Stauffer 2002, 194.
- Von Eles 2002, 174-179.
- Von Eles 2002, 168; cat. no. 191.
- (Ca 157/129 cm and 123/120 cm); Von Eles 2007, 201; Stauffer 2006, 14.
- Von Eles 2007, 201.
- Gleba 2008a, 48; Gentili 2003, von Eles 1998, 60.
- Von Duhn 1924, 321; Gleba 2008a, 51; Rastrelli 2000, 162.
- Gleba 2008a, 43-62 and map 2 for the occurrence of textiles.
- In some of the necropolises treated here, pseudomorphs or textile remains have been recovered on fibulas. In Alfedena pseudomorphs have been found on iron fibulas (Bedini et al. 1975, 446 no 1 and 2, 455 no 3, 457 no 5 and 11, 465 no 3, 470 no 1), in Sala Consilina there are fibulas with traces of textiles (Gleba 2008a, 61), in Torre Galli grave 33, 34, 73, 114 there are pseudomorphs on many fibulas (Pacciarelli 1999, 74, 151 no 13, 151 no 7 and 10, 161 no 5, 168 no 6, 415 pl. 189).
- Gleba 2008b, 24.
- Bentini/Boiardi 2007, 128; Stauffer 2002, 216-217.
- Gleba 2008b, 24, 13.
- Delpino/Bartoloni 2000, 224.
- Dion. Hal. *Ant. Rom.* 3, 61.
- It has been suggested that the precious examples of textiles from the princely tombs in along the Danube (Hohmichele) and Rhine (Hochdorf) are imports of Etruscan manufacture from the Italian peninsula. Dal Ri 1995-1996, 379.
- Stauffer 2002, 215.
- Bentini/Boiardi 2007, 130.
- Bergonzi et al. 2001, 129.
- Bentini/Boiardi 2007, 136; Negroni Catacchio 2007, 536.
- Gleba 2008a, 53.
- Bergonzi et al. 2001, 130.
- Gleba 2008b, 25; Bergonzi et al. 2001, 128.
- Similar placing of fibulas vertically on the chest of the deceased occurs at several sites, e.g. at Pratica di Mare (Lavinium) tomb 50, Negroni Catacchio 2007, 548.
- Grave no 4889(A) and 4891(B), Cinquantaquattro 2001, 69-70.
- Bergonzi 2007, 88, fig. 1.C; Pacciarelli 2007, 120, fig.2; Bentini/Boiardi 2007, 136.
- Bonfante 2009b, 185; Negroni Catacchio 2007, 537.
- Bentini/Boiardi 2007, 128.
- Peroni 1960, 358-359.
- The urn can also 'wear' earrings, necklaces etc. Bentini/Boiardi 2007, 127.
- This is e.g. the case in Tomba 89 at Verucchio, where a silver *fibula serpeggiante* and fragments of *fibule a sanguisuga*, all with signs of burning, were found with the cremated remains in the urn, von Eles 2002, 173.
- Negroni Catacchio 2007, 537.
- Colburn/Heyn 2008, 3.
- Paris, Musée du Louvre inv. no. Cp. 282 (Bj 816), *Principi etruschi* 2000, 325.
- Cogle 2009, 6.
- Stauffer 2002, 212.
- Cogle 2009, 9. E.g. in graves 508 and 544.
- Lomas 2009, 22.
- Lomas 2009, 22.
- Stauffer 2002, 208.
- Bonfante 2009, 183.
- E.g. Esposito 1999, 51.
- Hendzsel et al. 2008, 5. Furthermore, we cannot know for certain if they render 'ordinary' people or dress. For example, the statues depicting the Roman Emperors render the toga as it should be worn ideally, not how it actually was, Davies 2005, 121.
- Gleba 2008a, 24.
- Dated to the second half of 7<sup>th</sup> century BC, Prayon 1975, 179.
- Haynes 2000, 92.
- Prayon 1975, 169; Haynes 2000, 92.
- Prayon 1975, 170.
- Colonna/von Hase 1984, 30.
- Bonfante 1975, 46.
- Bonfante 1975, 45-46.
- Bonfante 1975, 46.
- This way of dressing is also depicted on the famous tintinnabulum from the Archaeological Museum of Bologna, and on later objects such as the bronze chariot from Monteleone di Spoleto, Metropolitan Museum of Art, New York (ca 540 BC), on painted terracotta plaques from Cerveteri, British Museum (ca 550 BC), and the terracotta frieze plaques from Murlo, Poggio Civitate, Antiquarium di Poggio Civitate (ca 550 BC).
- Negroni Catacchio 2007, 539.
- Dated to the 6<sup>th</sup> century BC.
- E.g. Bonfante 1975, 8.
- E.g. bucchero figurines, dated to the 7<sup>th</sup> century BC, from Tumulo di Poggio Gallinara at Tarquinia, *Principi etruschi* 2000, 305; Damgaard Andersen 1993, 30; and bronze figurines from Sardinia, Lilliu 1956, no 181.
- Bonfante 1975, 8, who uses the Greek term chiton for the tunic.
- Ehrenberg 1989, 147-148.
- Robb 1997, 45.
- Bonfante 2009a, 109. Ridgway 1965, 1-5.
- Bonfante 2009a, 112; Berggren 1990, 23-36. Furthermore, identification based on stature and human physique is not always straightforward, as illustrated by androgynous figures belonging to the Etruscan period, Sandhoff 2009.



- <sup>118</sup> Esposito 2003, 55; Haynes 2000, 41.  
<sup>119</sup> Esposito 2003, 55.  
<sup>120</sup> Falconi Amorelli 1966, 1. Museo Villa Giulia inv. no 59917.  
<sup>121</sup> Haynes (2000, 19) doubts whether it represents a priest or a warrior; Falconi Amorelli 1966, 13.  
<sup>122</sup> Bonfante 2009, 115.  
<sup>123</sup> Cogle 2009, 7.  
<sup>124</sup> According to Roman tradition the toga was originally worn by both men and women, and by girls before puberty. What made the toga manly (*virilis*) was not so much the garment itself, as how it was worn; Davies 2005, 121.  
<sup>125</sup> For an analysis and discussion of the usability of archaeological artefacts as indicators of biological sex and gender, see Brøns (forthcoming).  
<sup>126</sup> Fisher/Dipaolo Loren 2003, 226.  
<sup>127</sup> Torelli 2000, 597. Inv. no Cp 6628.  
<sup>128</sup> The figures have been interpreted as Kalchas and King Agamemnon, Brendel 1978, 175.  
<sup>129</sup> The Greek influence in Etruscan dress is evident from the 6<sup>th</sup> century BC. Bonfante 1975, 3-4.  
<sup>130</sup> Thanks to Nora Petersen for this interpretation.  
<sup>131</sup> Holliday 1993, 175.  
<sup>132</sup> Holliday 1993, 183.  
<sup>133</sup> Haynes 2000, 281.  
<sup>134</sup> Steingraber 2006, 262.  
<sup>135</sup> Vincenti 2004, 189, 193.  
<sup>136</sup> Yet, some scholars express reluctance in regard to the use of fibulas as determinants of sex, e.g. Horsnæs 1997, 458.  
<sup>137</sup> Amann 2000, 33.  
<sup>138</sup> See also Curta 2005, 127.  
<sup>139</sup> Amann 2000, 33.  
<sup>140</sup> Arnold 2002, 245.  
<sup>141</sup> Fisher/Dipaolo Loren 2003, 226.  
<sup>142</sup> Fisher/Dipaolo Loren 2003, 225.
- BIBLIOGRAPHY**
- D'Agostino, B. 1970, Tombe della prima età del Ferro a S. Marzano sul Sarno, *MEFRA* 82, 571-619.  
D'Agostino, B./P. Gastaldi 1988, *Pontecagnano II. La necropoli del Picentino 1. Le tombe della Prima Età del Ferro*, Naples.  
Amann, P. 2000, *Die Etruskerin. Geschlechterverhältnis und Stellung der Frau im frühen Etrurien (9.-5. Jh.v. Chr.)*, Vienna.  
Arnold, B. 2002, "Sein und werden": Gender as Process in Mortuary Ritual, in S.M. Nelson/M. Rosen-Ayalon (eds), *In Pursuit of Gender. Worldwide archaeological approaches*, Walnut Creek, 239-256.  
Badoni, F.P./M.R. Giove 1980, *Alfedena. La necropolis di Campo Consolino*, Chieti.  
Bartoloni, G. 2007, La società e i ruoli femminili nell'Italia preromana, in von Eles 2007, 13-24.  
Bartoloni, G. 2000, La donna del principe, in G. Bartoloni/C. Morigi Govi (eds), *Principi Etruschi: tra Mediterraneo ed Europa*, Venice, 272-277.  
Baxter, J.E. 2005, *The archaeology of childhood. Children, Gender, and Material Culture*, Walnut Creek.  
Bedini, A. et al. 1975, *Alfedena (L'Aquila). Scavi 1974 nella necropolis*, *NSc* 1975, 409-481.  
Bentini, L./A. Boiardi 2007, Le ore della Belleza, in von Eles 2007, 127-138.  
Berggren, K. 1990, The Capestrano warrior and the Numana head, *OpRom* 18:2, 23-36.  
Bergonzi, G. et al. 2001, L'ornamentum personale e l'istrumentum domestico, in *Eroi e Regine. Piceni Popolo d'Europa*, Rome, 122-133.  
Bergonzi, G. 2007, Donne del Piceno dall'età del ferro all'Orientalizzante, in von Eles 2007, 87-95.  
Bergonzi, G./P. von Eles 1988, Archaeological and anthropological evidence from the Iron Age necropolis at Montericco, Imola (Emilia-Romagna, Italy): A comparison, *Rivista di Antropologia, Supplemento del vol. 66*, 337-348.  
Bietti Sestieri, A.M. (ed.) 1992, *La necropoli laziale di Osteria dell'Osa*, Rome.  
Bietti Sestieri, A.M. 2008, Domi mansit, lanam fecit: Was that all? Women's social status and roles in the early Latial communities (11th - 9th centuries BC), *JMA* 21, 1, 2008, 133-159.  
Bietti Sestieri, A.M./A. De Santis/L. Salvadei 1997, The Iron Age cemetery of Osteria dell'Osa (Rome) - an integrated anthropological and cultural study, in K.F. Rittershofer (ed.), *Demographie der Bronzezeit. Paläodemographie - Möglichkeiten und Grenzen*, Espelkamp, 258-271.  
Bietti Sestieri, A.M./E. Macnamara 2007, *Prehistoric Metal Artefacts from Italy (3500-720 BC) in the British Museum*, London.  
Bonfante, L. 1975, *Etruscan Dress*, Baltimore.  
Bonfante, L. 2009a, Gender benders, in E. Herring/K. Lomas (eds), *Gender Identities in Italy in the First Millennium BC*, Oxford, 109-116.  
Bonfante, L. 2009b, Ritual dress, in M. Gleba/H. Becker (eds), *Votives, Places and Rituals in Etruscan Religion. Studies in Honor of Jean MacIntosh Turfa*, Leiden, 183-192.  
Brendel, O. 1978, *Etruscan Art*, Kingsport.  
Brøns, C. forthcoming, Manners make the man. Challenging a persistent stereotype in Italian Iron Age graves, *ARID*.  
Burgers, G.-J./D.J. Biesiekirska/F. Laera 2011, Le ricognizioni a tappeto nel territorio, in G.-J. Burgers/J.P. Crielaard 2011, 119-131.  
Cinquantaquattro, T. 2001, *Pontecagnano II.6 L'Agro Picentino e la necropoli di località Casella*, Naples.  
Chiartano, B. 1994, *La necropoli dell'età del Ferro dell'Incoronata e di S. Teodoro. Scavi 1978 - 1985*, Galatina.  
Cianferoni, G.C. 2007, Orizzonti di donne nella società etrusca tra IX e VII secolo a. C., in von Eles 2007, 117-124.  
Colburn, C.S./M.K. Heyn (eds) 2008, *Reading a dynamic canvas: Adornment in the Ancient Mediterranean World*, Newcastle.  
Colonna, G./F.-W. von Hase 1984, Alle origine della statuarie etrusca: La tomba delle statue presso Ceri, *StEtr* 52, 13-59.  
Coppa, A./R. Macchiarelli/L. Salvadei 1981, Craniologia della popolazione dell'Età del Ferro di Alfedena, *Rivista di antropologia* 61, 275-290.  
Cosentino, S./V. D'Ercole/G. Mieli 2001, *La necropoli di Fossa. Le testimonianze più antiche* 1, Carsa.  
Cogle, L. 2009, Expressions of gender through dress in Latial Iron Age mortuary contexts. The case of Osteria dell'Osa, in E. Herring/K. Lomas (eds), *Gender identities in Italy in the first millennium B.C.*, Oxford, 55-67.  
Crescenzi, L./E. Tortorici 1983, *Ardea, Immagine una ricerca*, Rome.  
Crescenzi, L./E. Tortorici 1993, Scavi a Ardea, *Archeologia Laziale* 5, 38-47.  
Cuozzo, M. 2003, *Reinventando la tradizione. Immaginario sociale, ideologie e rappresentazione nelle necropoli orientalizzanti di Pontecagnano*, Paestum.  
Curta, F. 2005, Female dress and Slavic bow fibulae in Greece, *Hesperia* 74, 101-146.



- Cygielman, M. 2003, Gli ornamenti, in A. Bottini (ed.), *Moda costume bellezza nell'antichità*, Livorno, 68-83.
- Dal Ri, L. 1995-1996, I ritrovamenti presso il rifugio Vedretta di Ries/Rieserferner, *Rivista di Scienze Preistoriche* 47, 367-388.
- Damgaard Andersen, H. 1993, The Etruscans Ancestral Cults. Its Origin and Development and the Importance of Anthropomorphization, *AnalRom* 21, 7-65.
- Davies, G. 2005, What made the Roman Toga virilis?, in L. Cleland et al. (eds), *The Clothed Body in the Ancient World*, Oxford, 121-130.
- De Natale, S. 1992, *Pontecagnano. La necropoli di S. Antonio: Propr. ECI. 2. Tombe della Prima Età del Ferro*, Naples.
- De Santis, A./G. Mieli 2008, Nel Foro di Cesare prima di Cesare, *Archeo*, 24.9, 12-14.
- Delpino, F./G. Bartoloni 2000, Il principe: stile di vita e manifestazioni del potere, in *Principi etruschi tra Mediterraneo ed Europa*, Bologna, 221-229.
- Ehrenberg, M. 1989, *Women in prehistory*, London.
- Esposito, A.M. 1999, *Principi Guerrieri: la necropoli etrusca di Casale Marittimo*, Milan.
- Esposito, A.M. 2003, L'Etruria in età orientalizzante e arcaica, in A. Bottini (ed.), *Moda costume bellezza nell'antichità*, Livorno, 54-67.
- Facenna, D./M.A. Fugazzola Delpino 1976, Tivoli, in G. Colonna et al. (eds), *Civiltà del Lazio primitivo*, Rome, 188-212.
- Falconi Amorelli, M.T. 1966, Tomba villanoviana con bronzo nuragico, *ArchCl* 18, 1-15.
- Fisher, G./D. Dipaolo Loren, 2003, Embodying Identity in Archaeology: Introduction, *CAJ* 13.2, 225-230.
- Gastaldi, P. 1998, *Pontecagnano. La necropoli del Pagliarone*, Naples.
- Gastaldi, P. 1993, Recensioni: M.C. Vida Navarro, Warriors and Weavers: Sex and Gender in Early Iron Age Graves from Pontecagnano, *AION* 15, 341-344.
- Geller, P.L. 2005, Skeletal analysis and theoretical complications, *World Archaeology* 37, 597-609.
- Gentili, G. 2003, Verucchio Villanoviana. Il sepolcro in località Le Pegge e la necropoli al piede della Rocca Malatestiana, *MonAnt* 59.
- Gerstad, E. 1956, *Early Rome II. The tombs*, Lund.
- Gleba, M. 2008a, *Textile Production in Pre-Roman Italy*, Oxford.
- Gleba, M. 2008b, You Are What You Wear: Scythian Costume as Identity, in M. Gleba/C. Munkholt/M.L. Nosch (eds), *Dressing the Past*, Oxford, 13-28.
- Gowland, R. 2001, Playing Dead: Implications of mortuary evidence for the social construction of childhood in Roman Britain, in *TRAC 2000. Proceedings of the Tenth Annual Theoretical Roman Archaeology Conference*, London, 152-168.
- Gowland, R. 2006, Ageing the Past: Examining Age Identity from Funerary Evidence, in R. Gowland/C. Knüsel (eds), *Social Archaeology of Funerary Remains*, Oxford, 143-154.
- Haynes, S. 2000, *Etruscan Civilization*, London.
- Hencken, H. 1968, *Tarquinius and Etruscan origins*, London.
- Hendzsel, I. et al. 2008, "On the borders of East and West": A Reconstruction of Roman Provincial and Barbarian Dress in the Hungarian National Museum, in C. Munkholt/M. Gleba/M.L. Nosch (eds), *Dressing the past*. (Ancient textiles series 3), Oxford, 29-42.
- Holliday, P.J. 1993, Narrative structures in the François Tomb, in P.J. Holliday (ed.), *Narrative and event in ancient art*, Cambridge, 175-197.
- Horsnæs, H.W. 1997, Giorgio Buchner – David Ridgway: Pithekoussai I. La necropolis: tombe 1 – 723 scavate dal 1952 al 1961, Rome, 1993, in H. Damgaard Andersen et al. (eds), *Urbanization in the Mediterranean in the 9th to 6th Centuries BC* (Acta Hyperborea 7), Copenhagen, 453-462.
- Iaia, C. 1995, Simbolismo funerario e organizzazione sociale a Tarquinia nelle fasi iniziali dell'età del Ferro, in N.N. Catacchio/L. Domanico/M. Miari (eds), *Preistoria e Protostoria in Etruria, Secondo incontro di studi*, Milan, 249-259.
- Iaia, C. 2007a, Identità e comunicazione nell'abbigliamento femminile dell'area circumadriatica fra IX e VII secolo A.C., in Von Eles 2007, 25-36.
- Iaia, C. 2007b, Elements of female jewellery in Iron Age Latium and southern Etruria: identity and cultural communication in a boundary zone, in M. Blečić et al. (eds), *Scripta Praehistorica in honorem Biba Terzan* (Situla 44), Ljubljana, 519-531.
- Lilliu, G. 1956, *Sculture della Sardegna Nuragica*, Cagliari.
- Lomas, K. 2009, Gender identities and cultural identities in the Pre-Roman Veneto, in E. Herring/K. Lomas (eds), *Gender Identities in Italy in the First Millennium BC*, Oxford, 13-26.
- Lynnerup, N./P. Bennike/E. Iregren 2008, *Biologisk antropologi med human osteologi*, Copenhagen.
- Mays, S. 1998, *The archaeology of human bones*, London.
- Mays, S. 2000, The archaeology and history of infanticide, and its occurrence in earlier British populations, in J. Sofaer Derevenski (ed.), *Children and material culture*, New York, 180-190.
- Money, J./J.G. Hampson/J.L. Hampson 1955, An examination of some basic sexual concepts: The evidence of human hermaphroditism, *Bulletin of the Johns Hopkins Hospital* 97, 301-319.
- Negroni Catacchio, N. 2007, Le vesti sontuose e gli ornamenti, monili d'ambra e di materie preziose nelle tombe femminili di età orientalizzante e arcaica in Italia, in M. Blečić et al. (eds), *Scripta Praehistorica in honorem Biba Terzan* (Situla 44), Ljubljana, 533-556.
- Onisto, N. 2002, Analisi morfologica e metrica dei resti ossei umani, in von Eles 2002, 277-289.
- Pacciarelli, M. 1999, *Torre Galli. La necropoli della prima età del Ferro. Scavi P. Orsi 1922 – 1923*, Catanzaro.
- Pacciarelli, M. 2007, Identità di genere e corredi femminili nelle grandi necropoli della prima età del ferro dell'Italia meridionale, in von Eles 2007, 117-124.
- Peroni, R. 1960, Allumiere. Scavo di tombe in località "La Pozza", *NSc* 14, 341-362.
- Prayon, F. 1975, Zur Datierung der drei frühetruskischen Sitzstatuetten aus Cerveteri, *RM* 82, 165-179.
- Rastrelli, A. 2000, La tomba a tramezzo di Poggio alla Sala nel quadro dell'Orientalizzante recente di Chiusi, *AnnFaina* 7, 159-184.
- Ridgway, B.S. 1965, The East Pediment of the Siphnian Treasury: A Reinterpretation, *AJA* 69, 1-5.
- Robb, J. 1997, Female beauty and male violence in early Italian society, in A.O. Koloski-Ostrow/C.L. Lyons (eds), *Naked truths. Women sexuality and gender in classical art and archaeology*, London, 43-65.
- Rubini, M./F. Mallegni 1996-1997, La necropoli dell'età del Ferro di Ardea (Roma, Lazio, VIII-VI sec. a.C.). Evidenze di Paleonutrizione, *Archivio per l'Antropologia e l'Etnologia* 126-127, 125-134.
- Rubini, M./R. Vargiu/A. Coppa 1992, Paleodontologia degli inumati della necropoli dell'Età del Ferro di Ardea (VIII – VI secolo, Roma, Lazio), *Antropologia contemporanea* 15, 57-61.

- Ræder Knudsen, L. 2002, La tessitura a tavolette nella tomba 89, in von Eles 2002, 220-234.
- Salvini, M. 2007, *Le tombe villanoviane di Sesto Fiorentino. L'età del Ferro nel territorio* (Biblioteca di Studi etruschi 43), Pisa.
- Sandhoff, B. 2009, An investigation of androgyny in Etruscan art, in E. Herring/K. Lomas (eds), *Gender Identities in Italy in the First Millennium BC*, Oxford, 97-107.
- Sofaer Derevenski, J. 2000, *Children and material culture*, New York.
- Stauffer, A. 2002, I tessuti, in von Eles 2002, 192-215.
- Stauffer, A. 2006, L'abito dalla tomba B/1971, in L. Bentini/P. Poli/T. Trocchi (eds), *Il potere e la morte. Aristocrazia guerrieri e simboli*, Rimini, 14.
- Steingraber, S. 2006, *Abundance of Life: Etruscan Wall-Painting*, Los Angeles.
- Stig Sørensen, M.L. 2000, *Gender Archaeology*, Cambridge.
- Toms, J. 1998, The construction of gender in Early Iron Age Etruria, in R. Whitehouse (ed.), *Gender and Italian archaeology. Challenging the stereotypes* (Accordia specialist studies on Italy 7), London, 157-179.
- Toms, J. 2000, The arch fibula in Early Iron Age Italy, in D. Ridgway et al. (eds), *Ancient Italy in its Mediterranean setting. Studies in honour of Ellen Macnamara* (Specialist Studies on the Mediterranean 4), London, 91-116.
- Torelli, M. 2000, *Gli Etruschi*, Venice.
- Trucco, F. 1987, *Profilo socio-culturale di una comunità enotria della prima età del Ferro: le evidenze funerarie di Sala Consilina*, Phd, Rome.
- Vallois, H.V. 1960, Vital Statistics in Prehistoric Population as Determined from Archaeological Remains, in R.F. Heizer/S.F. Cook (eds), *The application of quantitative methods in archaeology*, London, 186-222.
- Veii 1963: Veio (Isola Farnese) – Scavi in una necropoli villanoviana in località "Quattro Fontanili", *NSc* 17, 77-279.
- Veii 1965: Veio (Isola Farnese) – Continuazione degli scavi nella necropoli villanoviana in località "Quattro Fontanili", *NSc* 29, 49-236.
- Veii 1967: Veio (Isola Farnese) – Continuazione degli scavi nella necropoli villanoviana in località "Quattro Fontanili", *NSc* 21, 87-286.
- Vida Navarro, M.C. 1992, Warriors and weavers: sex and gender in early Iron Age graves from Pontecagnano, *Accordia Research papers* 3, 67-99.
- Vincenti, V. 2004, La tomba Bruschi di Tarquinia: recupero di un contesto, in A.M. Moretti Sgubini (ed.), *Scavo nello Scavo. Gli etruschi non visti. Ricerche e "Riscoperte" nei depositi dei Musei archeologici dell'Etruria Meridionale*, Rome, 188-198.
- Von Duhn, F.K. 1924, *Italische Gräberkunde I*, Heidelberg.
- Von Eles, P. 1998, *Verucchio*, Museo Civico Archeologico, Rimini.
- Von Eles, P. 2002, *Guerriero e Sacerdote: Autorità e Comunità nell'Età del Ferro a Verucchio: la Tomba del Trono*, Firenze.
- Von Eles, P. (ed.) 2007, *Le ore e i giorni delle donne. Dalla quotidianità alla sacralità tra VIII e VII secolo a.C.*, Verucchio.
- Weglian, E. 2001, Grave Goods Do Not a Gender Make: A Case Study from Singen am Hohentwiel, Germany, in B. Arnold/N.L. Wicker (eds), *Gender and the archaeology of death*, Lanham, 137-155.

MARIENDALSVEJ 54 5. TV.  
2000 FREDERIKSBERG  
DENMARK  
cecilie.broens@natmus.dk

# Greek colonists and indigenous populations at L'Amastuola, southern Italy II

Jan Paul Crielaard & Gert-Jan Burgers

## Abstract

*This article represents a second preliminary report on the fieldwork conducted between 2005 and 2010 in and around the Archaic site of L'Amastuola (Apulia) by VU University Amsterdam. The activities included excavations on the site's south terrace, the use of surface surveys and satellite images to study landscape and settlement patterns around L'Amastuola, and excavations in the necropolis area. The excavations brought to light more evidence to support our thesis of Greek-indigenous cohabitation at the site, as well as some invaluable information about the post-abandonment phase at the site, when a cult of the Dioskouroi was installed, presumably by the Tarentines who were occupying L'Amastuola. A tomb-like cult structure associated with this cult was erased during the early 3<sup>rd</sup> century BC, possibly in the wake of the Roman conquest of southern Italy.\**

## 1. INTRODUCTION

In 2003, the Department of Archaeology of VU University Amsterdam (ACVU), in collaboration with the *Soprintendenza ai Beni Archeologici della Puglia*, started a fieldwork project at the site of L'Amastuola, which is 15 km north-west of Taranto. The project encompasses both excavations and field surveys, as well as non-destructive geophysical surveys and geo-archaeological and botanical analyses. An article published in the 2007 *BA-Besch*<sup>1</sup> provides descriptions of the site and its environs, previous archaeological research at L'Amastuola, the aims of the project and the scientific framework within which the fieldwork takes place. The core of that article is a preliminary report on the excavations, the surface surveys and the survey of the cemetery area that took place during the 2003-2005 field seasons, followed by a first analysis of the pottery found in the excavations, and some preliminary conclusions regarding the indigenous habitation of the site, the relationship between Greeks and indigenes, local material culture and the layout of the colonial landscape.

We concluded that Iron Age inhabitation at L'Amastuola started in the later 8<sup>th</sup> century BC, when more indigenous sites in Salento were occupied for the first time. In the early 7<sup>th</sup> century, Greeks settled at L'Amastuola, marking the beginning of a phase of cohabitation of a probably peaceful nature. At about the same time, the site was fortified with a double circumvallation. Domestic, cultic and funerary evidence shows that elements of native and Greek cultural traditions became increasingly integrated and evolved into

a shared, 'third culture'. During the 7<sup>th</sup> and 6<sup>th</sup> centuries, L'Amastuola had its own metal and pottery production workshops and, as indicated by ceramic and other finds, maintained links with the wider Greek and indigenous world around it. All this suggests that L'Amastuola was home to an independent community with a mixed indigenous-Greek background. Around the mid 5<sup>th</sup> century, substantial alterations in the organization of settlement and cemeteries and in land use took place; this can be related to the conflicts that written sources say arose between the colonists of Taras and the indigenous population of the region, coinciding with a phase of territorial expansion by the Tarentines. It was presumably at this point in time that L'Amastuola ceased to exist as an independent settlement and became part of the *chora* of Taras. We feel that the outcomes of the first campaigns have shed important new light both on the character of the site and on the relationships between indigenous peoples and Greek settlers in southern Italy during the Archaic period. In any case, our first preliminary report has stirred the debate on the Greek colonization in the region.<sup>2</sup>

The present article represents a second preliminary report on the fieldwork and other research activities that were carried out in and around L'Amastuola in the period 2005-2010. It contains:

1. the results of the last two campaigns of excavations of the settlement on the south terrace (2007-2008),
2. a study of landscape and settlement patterns around L'Amastuola, combining information from surface surveys and satellite images (2005-2010), and

3. the results of the excavations in the necropolis (2010).

This article follows the structure of our earlier report. First, brief reports on the fieldwork are given (parts 2-4; including in part 2 an overview of the findings in the various excavation trenches). These are followed in part 5 by preliminary conclusions in relation to the themes that we focus on in our research project (i.e. Greek-indigenous relationships, early colonial material culture, local identity, and the layout of the colonial landscape).

## 2. OVERVIEW OF THE EXCAVATIONS ON THE SOUTH TERRACE (2007-2008)

Excavations were carried out in three trenches (fig. 1). In Trench 4 only some earlier layers underlying *oikos ε* were exposed. In Trench 6 we dug until we reached the levels associated with the earliest phase of the potter's workshop; the trench was also substantially extended to the north and the south-east, where evidence of cult activities post-dating the settlement came to light. Trench 5 was also enlarged in order to further expose the parts of walling found in 2005; this led to the finding of the remains of an indigenous hut and

a later domestic complex with storage facilities.

### Trench 4 (Q21cd ... S23ac)

Excavated: 2007. Location: directly north-west of the *Soprintendenza's* central test trench. Aim: to find evidence of continuation of occupation in a north-westerly direction, and to determine the size, nature and density of occupation and diachronic developments in architecture and use of space.

Excavations in 2004-2005 had brought to light the foundations of a small rectangular building (building δ) - possibly the kitchen of a larger edifice - and those of a somewhat larger building (*oikos ε*) that had been used for the production of iron implements but had also had a domestic function.<sup>3</sup> The floor and the floor matrix of *oikos ε* still awaited excavation, which was accomplished during the first week of the 2007 season. The floor matrix in the south part of *oikos ε* yielded a fragment of a banded skyphos, datable to the late 6<sup>th</sup> century. This find allows *oikos ε* to be attributed with greater certainty to the end of the 6<sup>th</sup> century BC.<sup>4</sup> Its floors, walls, furnace and bench were all set in or on top of a layer of *terra rossa*. At L'A-mastuola, this type of soil is found lying on the bedrock and generally contains the earliest evi-

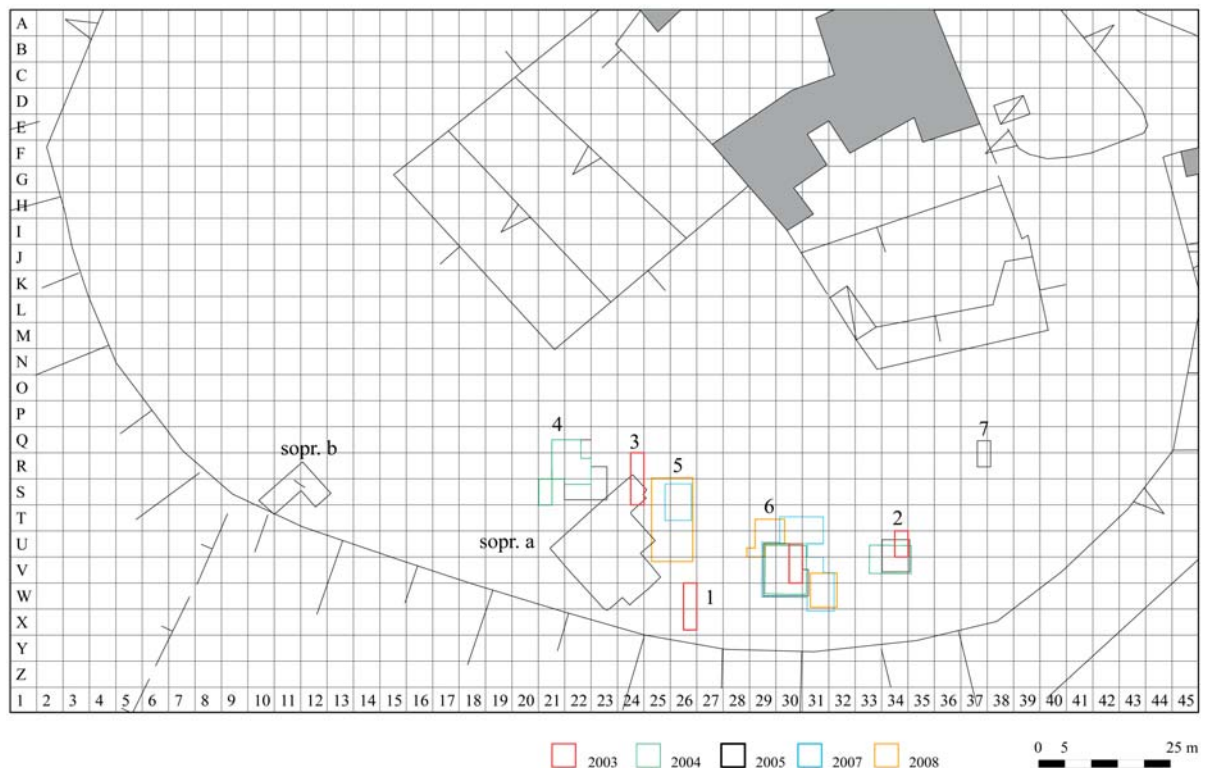


Fig. 1. L'A-mastuola, south terrace: location of the trenches (2003-2008).





Fig. 2. Trench 4: oikos ε (from NE).



Fig. 3. Trench 4: oikos ε a.-b. stamnos found under the portico (un. 172/175 #444 SF39); c.-d. same stamnos in the process of restoration.

dence of occupation on the hill, often in the form of scattered *impasto* fragments. A heavily burnt spot was located under the south wall of *oikos* ε; not far from this and within the *terra rossa* layer we found the bones of an almost complete leg of a goat or sheep. This suggests that before the construction of *oikos* ε this was an outside area where fires were lit and refuse was deposited. To find confirmation of the above date, we turned our attention to the portico or antechamber, which is paved with large stones (fig. 2: top of photo). We selected a part where no stones were present and soon noticed the fragments of a large vessel (fig. 3a-b). It appeared to be an almost complete stamnos (fig. 3c-d) that had been partly dug into the *terra rossa*. Later, it had been smashed - deliberately, it seems - by a large flat slab belonging to the porch's pavement; the slab was found lying right on top of the vase (see fig. 3a). The exact relationship between the stamnos and *oikos* ε is not clear.

In any case, the date of the vase in the 2<sup>nd</sup> or 3<sup>rd</sup> quarter of the 7<sup>th</sup> century provides a *terminus post quem* for the construction of this building.<sup>5</sup>

#### Trench 5 (S25 ... V26ab)

Excavated: 2005-2008. Location: directly north-east of the Soprintendenza's central test trench, and east of Trench 3. Aim: to find evidence of continuation of occupation in a north-easterly direction, and to determine the size, nature and density of occupation and diachronic developments in architecture and use of space.

In 2005, only a small part of this trench was excavated. On the basis of what was visible then, it was thought that this area contained wall remains belonging to a rectangular structure that, like buildings α and ε, was oriented north-east/south-west. Part of a curving wall was found more to the west. Its function was not exactly clear; one possibility is that it constituted a terrace and/or a division wall that continued in a north/north-westerly direction.<sup>6</sup> When in 2007 and 2008 the trench was expanded to the west and south (see fig. 4), it became clear that this interpretation was only partly correct. The curvilinear wall appeared to belong to a larger structure, probably an oval hut (figs 4-5). Its stone foundation had been partly constructed on top of the bedrock. The stratigraphy connected with this initial phase is not intact, but relevant layers incorporate patches of burnt material, including burnt clay and burnt botanical remains. Among the associated finds probably belonging to floor deposits were a spindle whorl, a grinding stone, and an interesting mixture of pottery types and shapes, including pieces of pithoi, cooking ware, *impasto*, a 'colonial' hydria, a Corinthian type-A transport amphora, a possible stamnos and an aryballos; finewares comprise a few Sub-Geometric and Proto-Corinthian style pieces and a considerable amount of both matt-painted and 'colonial' pottery (ratio ca 40:60). This provides a rough date for the hut in the first half of the 7<sup>th</sup> century. During a second stage, this hut was overbuilt by a rectangular structure (figs 4-5: building ζ). Stones from the hut's foundation were possibly reused for its construction, which may explain why the northern part of these foundations was dislocated and why its southern part is not very well preserved. Associated pottery comprises 'colonial' finewares, *impasto*, a Corinthian type-A transport amphora and storage jars. It is not yet possible to provide a date for this structure. During a third stage, another quasi-rectangular room (fig. 4: building θ) was added to the south of building ζ. Both buildings seem to



Fig. 4. Trench 5: plan showing oikoi ζ, η and θ, curvilinear hut and circular stone structures.

have had an entrance to the north-east as well as a small bench built against the exterior of the back wall to the south-west; both had most probably been covered by roof tiles. Building θ clearly had a domestic function, as is indicated by the type of pottery that was found (coarse cooking wares, 'colonial' fine and medium wares, matt-painted ceramics), bone, burnt botanical material, burnt loam, a trapezoidal and a rounded cone-shaped spindle whorl, and a loomweight (fig. 6); however, this room also contained a bronze arrow-

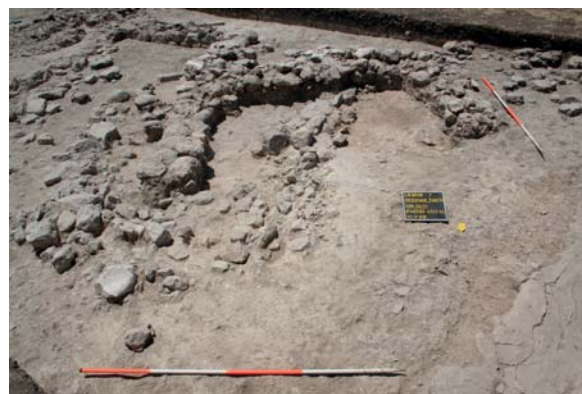


Fig. 5. Trench 5: oikoi ζ and θ and curvilinear hut (from NE).

head and a ca 15 cm long iron double axe (fig. 7). Bones of red deer (*Cervus Elaphus*) were found inside and just outside this room.<sup>7</sup>

To the south of this complex, part of another building was excavated (figs 4 and 8: building η). This building could be entered from the south-west via a porch that was separated by an internal division wall from the building's main room. A row of medium-sized stones was found lining the face of the building's west wall; they were probably put there to protect the wall's exterior. The building possibly had a tile roof. At least two floor levels could be discerned. The older floor contained fragments of 'colonial wares'; the more recent surface produced pieces of coarse cooking ware, 'colonial' wares, hydriai, a Corinthian type-A transport amphora and pithoi, but no matt-painted ceramics, which would make this building slightly later in date than the building complex ζ and θ.

Immediately west of this and located between buildings θ and η were two circular stone platforms (figs 4, 8 and 9a). The westernmost platform (un. 69) has a diameter of 1.87 m (measured north-south); the one in the east (un. 70) measures 1.93 m (also measured north-south). They were constructed mainly of small stones, delineated by a ring of neatly laid, medium-sized stones. Some of the latter were found standing vertically, suggesting that the platforms supported some kind of superstructure. Next to the exterior ring of medium-sized stones and following the contours of the platforms, bands of yellowish soil were found surrounding each of the platforms (fig. 9b). These features can perhaps also be connected to the superstructures of the platforms. The sparse evidence available for dating them (a hydria handle from the yellowish soil) suggests that the plat-





Fig. 6. Objects related to textile production. Trench 6, indigenous contexts: a. spindle whorl (un. 549 #1339 SF75); b. 'spool' (un. 631 #1607 SF71); c. stone loom weight (un. 626 #1606 SF70); d. spindle whorl (un. 626 #1578 SF61). Trench 5, floor of building θ: e. trapezoidal spindle whorl (un. 72 #206 SF72); f. rounded cone-shaped spindle whorl (un. 72 #206 SF71); g. loom weight (un. 72 #206 SF 68). Trench 5, oval hut: h.-i. two loom weights (un. 30 #208 SF69-70).



Fig. 7. Trench 6: a. hard-baked, ring-shaped object (un. 549 #1386 SF73). Trench 5, building θ: b. bronze arrow head (un. 63 #197 SF60); c. iron double axe (un. 75 #211 SF73).

forms are contemporaneous with buildings θ and ζ. The absence of finds made it difficult to establish the function of these structures. For this we may look at comparable stone platforms that have been found in the Aegean, for instance at Old Smyrna in Asia Minor, Lefkandi on Euboea, Mende in Chalkidike and Halai in Phthiotis (fig. 10; table 1). The ones at Lefkandi have two parallel slots running across the platform (fig. 10b). As a cognate type of building, we should mention a number of relatively small structures with a circular ground plan or foundation, usually consisting of a single line of stones, that have been unearthed

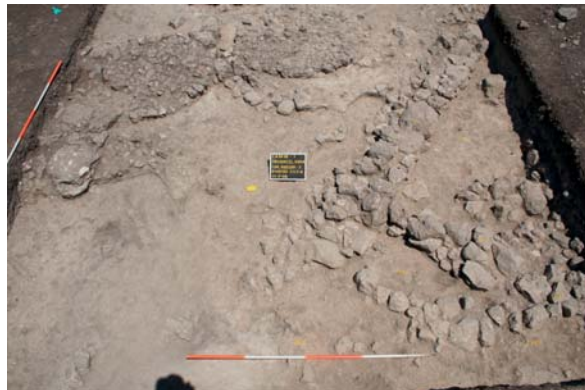


Fig. 8. Trench 5: oikos η and circular stone structures (from S).



Fig. 9. Trench 5: a. circular stone structures (from S); b. detail showing band of yellowish soil surrounding platform un. 69.

in a number of places, notably Skala Oropou (fig. 10d-e and table 1). Both the circular stone platforms and circular structures occur in domestic areas,<sup>8</sup> and both have been connected with clay models of granaries discovered in Attic graves from the mid 9<sup>th</sup> to mid 7<sup>th</sup> centuries BC, the most well known of these being the five models sur-

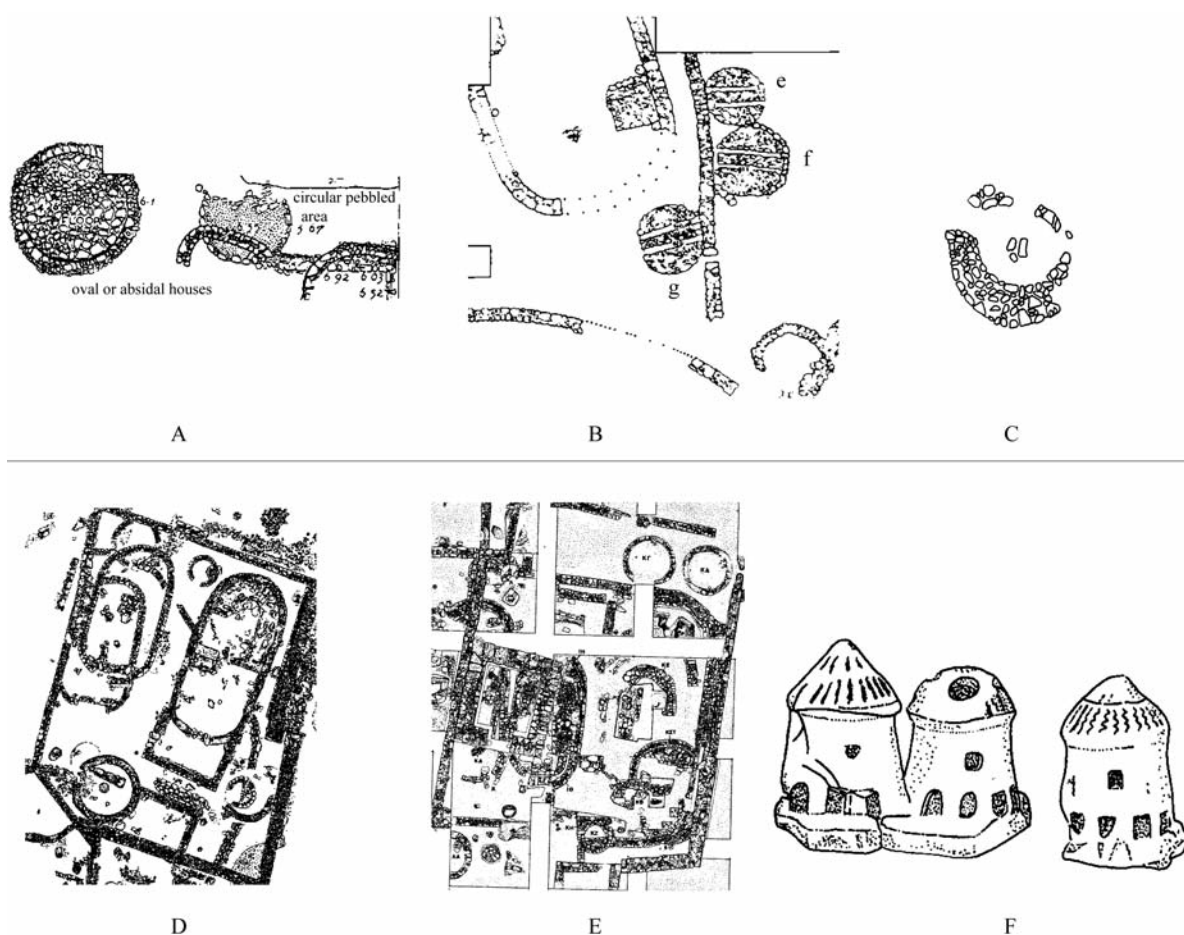


Fig. 10. Stone platforms: A. Old-Smyrna (ca 900 BC); B. Lefkandi-Xeropolis (e., f., g.; ca 750-700 BC). Circular stone structures: C. Larisa (Geometric period); D. Skala Oropou, Central Quarter: H, II, IA, IE (ca 750-600); E. Skala Oropou, Western Quarter: KΓ, KΔ, KZ (ca 700-600); F. clay model of granaries, Ano Mazaraki (ca. 750-700 BC). Drawings A.-C., F.: Mazarakis Ainian 1997, figg. 57, 96, 410a, 498; D.-E.: Mazarakis Ainian 2007, 121 fig. 4, 375 fig. 1.

mounting the lid of a clay chest found in the 'Tomb of the Rich Lady of the Areiopagos' (end of the Early Geometric period, ca 850 BC); another clay model of three granaries, presumably of Late Geometric date, has occurred in a votive deposit associated with the Geometric temple at Ano Mazaraki in Achaia (fig. 10f).<sup>9</sup> The models from the Athenian Areiopagos and Ano Mazaraki have slots at the base, like the circular stone platforms at Lefkandi. The stone platforms at Smyrna and Lefkandi and the circular structure with socle at Larisa are delineated by an outer ring of larger stones, just like the stone platforms at L'Amastuola. It has been suggested that this was to support a mudbrick superstructure.<sup>10</sup> The one at Smyrna was found next to one of the two 'tholoi', probably granaries partly sunk into the earth.<sup>11</sup> Summing

up, the context, date, diameter and evidence of a superstructure allow us to place the stone platforms at L'Amastuola within this group of circular structures and thus interpret them provisionally as granaries.

#### Trench 6 (U29 ... V31)

Excavated: 2007-2008. Location: between Trench 2 and the central test trench of the Soprintendenza. Aim: to obtain insights into site-formation and post-depositional processes, stratigraphy, and the nature and date of architectural remains.

In the northern half of this trench we found a circular feature of hard-packed material (figs 11 and 12a: un. 501/510). Under this, a much larger, semicircular area with traces of burning came to light. At a lower level the soil became more loose



Location	Shape	Diam. (m)	Date	Function	Reference
<b>L'Amastuola</b>	circular stone platforms - un. 69 - un. 70	1.87 1.93	later 7th / 6th c.		
<b>Smyrna</b>	circular stone paving	ca. 2	Early Geometric	for threshing or winnowing?	Mazarakis Ainian 1997, 122, with fig. 410a
<b>Lefkandi-Xeropolis</b>	3 stone platforms - E - F and G	1.6 2.2	Late Geometric	granaries (?)	Mazarakis Ainian 1997, 122, with figs. 96, 98
<b>Mende</b>	3 superimposed, circular pavings	1.7-1.8	ca. 750-725	granaries?	Mazarakis Ainian 1997, 122
<b>Halai</b>	circular stone platforms		7th c.	granaries? for mudbrick production?	Mazarakis Ainian 1997, 122
<b>Larisa</b>	circular structure with broad stone socle	3.7 (tot.) / 1.85 (int.)	Geometric (- Archaic)	granary?	Mazarakis Ainian 1997, 114-5, with fig. 57
<b>Lefkandi-Xeropolis</b>	circular structure		Late Geometric	hut? animal pen?	Mazarakis Ainian 1997, 116, with fig. 96
<b>Oropos, Centr. Quarter</b>	circular structure H	2.9	ca. 700-650	storeroom? pottery kiln?	Mazarakis Ainian 1997, 115-6, with fig. 77; Gounaris 2007, 111
<b>Oropos, Centr. Quarter</b>	circular structure IΓ	1.7	Late Geometric	?	Gounaris 2007, 114
<b>Oropos, Centr. Quarter</b>	circular structure IΔ	2.8	Late Geometric	?	Gounaris 2007, 114
<b>Oropos, Centr. Quarter</b>	circular structure IE	1,8	Late Geometric	granary?	Gounaris 2007, 114
<b>Oropos, West Quarter</b>	circular structure KΓ	2.6	ca. 700	granary?	Gounaris 2007, 115
<b>Oropos, West Quarter</b>	circular structure KΔ	2.4	Early Archaic	granary?	Gounaris 2007, 115
<b>Oropos, West Quarter</b>	circular structure KZ	< 1.8	Early Archaic	granary? cultic building?	Gounaris 2007, 116

Table 1. Stone platforms and circular structures in the Aegean

and ashy, and then very dark, almost black (un. 513). As *fig. 13* shows, stones delineate this area in the north-west, while in the centre there is a concentration of charcoal, and around it a mixture of burnt material, stones and chunks of baked clay. This unit contained a host of pottery fragments (*fig. 14*). Some fragments bearing traces of

burning were retrieved from the charcoal spot, while unburnt sherds - sometimes belonging to the very same pots - were found around it. Together with the pottery fragments, bone material and remains of cereals and other charred botanical remains were discovered. The pottery comprises especially Sub-Geometric finewares (of which



Fig. 11. Trench 6: plan showing potter's workshop (Phase 1), and circular sacrificial area to the north-east, and area of stone blocks to the south-east.

almost 13.5 kg were retrieved, see fig. 14 and table 2 below), with a minority of coarse wares and handmade wares, including matt-painted (a little over 6.5 kg; figs 15-16). The pottery fragments represent a limited range of vase shapes. Almost all of them can be linked to drinking, viz. wine consumption.<sup>12</sup> Some of the vase shapes can be associated with communal food consumption and/or food offerings or food sacrifices, probably of a rit-

ual nature. After the consumption of food and drink, the pottery was smashed and the fragments were left to the flames, as is suggested by the fact that some sherds of one and the same pot were burnt, whereas others remained unaffected by the fire.

It is not easy to determine in what kind of spatial setting these activities took place. Spread around the circular area that we excavated first



Fig. 12. Trench 6: a. plan and b. photograph of upper part of circular sacrificial area (un. 501), after removing un. 500 around it (from S).

(un. 501/510), we found a grinding stone and terracotta loomweights, terracotta 'spools',<sup>13</sup> a marble, a spindle whorl and a conical object. These seem at home in a domestic setting, but no walls were found nearby. A few metres to the north, a smaller area of clayish material was located; bone, 'colonial' and matt-painted pottery, and pestles suggest that this area was also associated with food preparation. The remains of possibly ritual activities involving fire present in un. 513 (the unit that contained most of the Sub-Geometric pottery) indicate that during this Sub-Geometric phase this was an outdoor area, an impression confirmed by the find of a strip of small stones and cobbles that seem to constitute a pathway (fig. 11: north-east corner).<sup>14</sup> The fire was possibly lit in a depression in the ground and later covered with earth.

The conclusion that these are the remains of what was probably a ritual meal that was consumed in the open air, leads us to theorize about the setting in which such rituals took place. Or, to put it differently, it poses the question for whom these rituals were performed and why exactly they were performed there. In answer to these questions, two further observations must be made. First, the location where the ritual meal took place is within the area of the settlement or in its periphery. There is no indication that this ritual took place regularly, let alone evidence of continuity of cult. This means that the ritual might have been a one-time cultic event. Second, if we wish to pin-

point the chronological setting of this event, both the Sub-Geometric 'colonial' pottery and the indigenous matt-painted pottery<sup>15</sup> place it in the first half of the 7<sup>th</sup> century BC. In other words, it can be related to an early stage in the settlement's occupation history, probably not long after Greeks had settled at L'Amastuola. For further hints towards a possible interpretation we may look at Siris, which has yielded comparable evidence, although of a somewhat later date (late Archaic). In the area of the extra-urban well sanctuary, remains of ritual meals were found, for which a variety of pottery shapes had been used (cooking ware, tableware, oil flasks, etc.). They were found next to a ritual hearth (*eschara*), which consisted of a simple depression in the ground in which a layer of stones had been placed. Another *eschara* in this area provided evidence of burnt sacrifices of seeds and fruits. One hydria without a base and another with a perforated base were used for making libations into the earth. These chthonic rites can be associated with Gaia, who according to an Archaic graffito mentioning 'GE-GE' was venerated in this sanctuary. Gaia may have been venerated as a deity responsible for the earth bearing fruit, but she may also have had a more specific meaning as one of 'the gods who possess the land'. As B. Otto in her discussion of these finds from Siris points out, in Aeschylus' *Suppliants* (680-903, esp. 890, 900) the Danaids address Ga (Gaia) when they find themselves as strangers in Argos searching for a new homeland.<sup>16</sup>



Vase types	No. of fragments	Weight (g)	Minimum no. of individual vessels
<b>Wheelmade, 'colonial'</b>			
drinking vessels (skyphoi, one-handled cups, shallow bowls)	181	1.509	20
pouring vessels (oinochoai, jugs)	20	898	12
hydriai	145	3.690	10
uncertain: oinochoai or hydriai (body frs.)	173	1.285	–
juglets, flasks	14	262	7
oil flasks	1	6	1
krateriskoi	13	380	4
amphorai (incl. transport amphorai)	44	3.375	–
stamnoi	3	–	3
fragments of medium wares, diagnostic	15	325	1
fragments of medium wares, undiagnostic	251	1.175	1
heavily burnt body frs.	76	575	1
<b>Total</b>	<b>936</b>	<b>13.480</b>	<b>60</b>
<b>Handmade, indigenous</b>			
matt-painted wares (incl. krater, amphora, drinking cup, kantharos, flask, globular vessel)	79	1,120	6
pithoi	34	4.100	2
basin	1	36	1
cooking wares, <i>impasto</i>	61	1.312	3
<b>Total</b>	<b>175</b>	<b>6.568</b>	<b>12</b>
<b>Other objects</b>			
limestone shell	1	16	1
jug stopper	1	125	1
flint (flakes)	2	--	2
<b>Total</b>	<b>4</b>	<b>141</b>	<b>4</b>
<b>Total entire find assemblage</b>			
	<b>1,115</b>	<b>20,189</b>	<b>76</b>

Table 2. Finds in the Sub-Geometric ritual deposit

The south-central part of Trench 6 is occupied by a pottery workshop that was established in this area in a succeeding occupational period (*fig. 11*). Due to the progress made during the 2007 excavation season in this part of the trench, we have been able to redefine the three phases in its development; this division differs slightly from the one

suggested in the first preliminary report.<sup>17</sup> Phase 1 is represented by a floor constructed with the help of large flagstones and by kiln D, which is approximately 1.7 m wide and 3.5 m long (*figs 11 and 17*). It is keyhole-shaped, with the stoke hole giving access to the combustion chamber being oriented towards the south-east (*fig. 18*: un. 346). Part of the





Fig. 13. Trench 6: burnt area un. 513 that contained Sub-Geometric and matt-painted fragments.

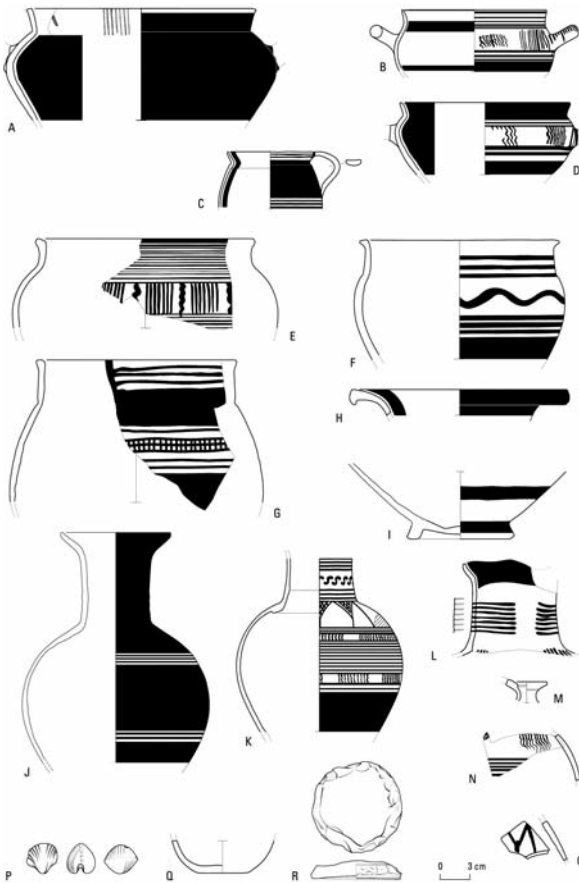


Fig. 14. Trench 6: selection of pottery from Sub-Geometric ritual deposition (un. 513): a.-d. skyphoi and one-handled cup; e.-g. kraters/krateriskoi; h.-i. hydriai; j.-l. oinochoai/jugs; m. flask; n.-o. stamnoi; p. limestone shell; q. handmade basin; r. terracotta jug stopper.



Fig. 15. Trench 6: large vessel with incised decoration from un. 513.

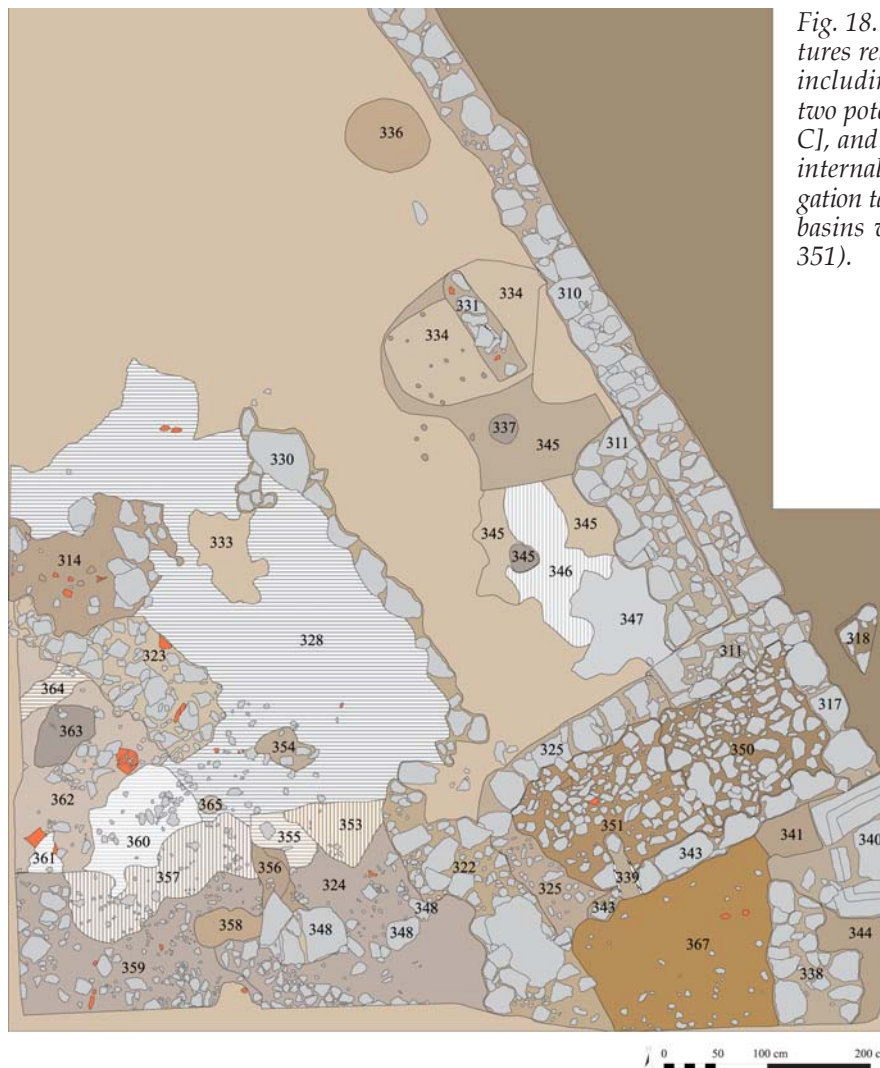


Fig. 16. Trench 6: matt-painted pottery from un. 513.



Fig. 17. Trench 6: pottery workshop in the process of excavation; in the foreground the flagstones, belonging to the earliest phase of the workshop (from SW).

kiln's perforated floor or 'grill', which is clearly defined by its ventilation holes, is the only part of the firing chamber that has been preserved (fig. 18: un. 334); un. 331 is a short stretch of walling that



presumably originally supported the kiln floor. Kiln E, which is situated more to the west, perhaps also belongs to this phase.

Phase 2 saw the construction of the more than 10 m long courtyard wall, running north-west/south-east and delineating the workshop in the east (*figs 11 and 18: un. 310*). In the south-east, a stone levigation tank was found (*fig. 18: un. 311*) with immediately to its south-west a large amount of compact material, possibly clay ready to be processed (*fig. 18: un. 347*). To the south of this levigation tank and at a slightly higher level were found two rounded basins (*fig. 18: un. 350, 351*), which in antiquity were presumably lined with clay, within a stone casing that is demarcated by walls un. 317, 325 and 343. The long courtyard wall un. 310 cuts through part of kiln D; this and the fact that the levigation tank and the watery

substances it must have contained are too close to the fuel hole of kiln D to allow it to operate well, show that in this second phase kiln D was no longer used. At the beginning of this second phase, a layer of earth was deposited on the floor of the workshop, covering most of the flagstones, although some of these were reused to construct a low wall (*fig. 18: un. 330*) that marked off the area where the potter's clay was prepared in the levigation tanks in the south-east corner. It is possible that this part of the workshop - that is, the area that runs parallel to its east wall - was roofed. Kiln C, which has a stone supporting wall to its south-east (*fig. 18: un. 314 and un. 323, respectively*), also belongs to phase 2. This kiln was possibly oval in shape, with its stoke hole facing north. The find of a misfired skyphos of local clay but of a type that in Metapontion is known from the early 5<sup>th</sup>





Fig. 19. Trench 6: blocked entrance in north wall (un. 528) of potter's workshop (from NE).



Fig. 20. Trench 6: domestic area immediately north of potter's workshop, with two spots for cooking (from S).



Fig. 21. Trench 6: iron object, probably an obelos (un. 536 #1381 SF67).

century,<sup>18</sup> suggests that phase 2 lasted until at least this point in time. It seems that the potter's shop was part of a larger area devoted to ceramic production, as the remains of one or more pottery kilns were uncovered to the east of this walled space.

When in 2007 and 2008 Trench 6 was extended towards the north, we found the stretch of wall that delineates the potter's workshop in the north-west (fig. 11: un. 528). This wall indeed makes a right angle with the long eastern wall (un. 310) of the potter's workshop. Careful observation of the stone courses that form this wall's north face shows that there was originally an entrance here that was later blocked with a large stone and some smaller ones placed on top of it (fig. 19). Ceramic finds indicate that this happened relatively early in the workshop's history (late 7<sup>th</sup>/early 6<sup>th</sup> century?). The entrance was further marked by flagstones lying within and in front of it (figs 19-20). At some point in time, and possibly related to the blocking of the northern entrance, two sections of walling were added, one running towards the north-west (un. 530), following the same direction as the eastern wall un. 310 (figs 11 and 20), the other running more towards the west but parallel to this (only a small part was excavated). These walls thus seem to have created a space that was closed on three sides and open to the north. The eastern wall (un. 530) was set more or less directly on top of the bedrock. Within this space we dis-

covered a succession of floors or surfaces that testify to its domestic use. Associated with one of the lower lying floors are two cooking areas (fig. 20), one in the middle of the room in the form of a hearth or fireplace for cooking at moderate temperatures (un. 538), the other more to the east for high temperature cooking enhanced by a fireplace on top of flat stone that would have reflected the heat (un. 540). Associated with this surface as well as with surfaces found at a higher level were objects that typically testify to a domestic function of this room, such as grinding stones, a pounder, a whetstone and loomweights.

During the final phase (phase 3), most of the workshop's area seems to have had a thick floor. The many finds associated with this floor show that the area now had a domestic function.<sup>19</sup> In the north-western corner of the walled space, directly south of wall un. 528, we found an area of burnt clay surrounded by stones. This could be the remains of either yet another kiln or (more likely) a fireplace. Partly beneath it was a second fireplace; next to it was found part of an iron object, which is interpreted as an *obelos* (fig. 21) for roasting meat.

In 2007, Trench 6 was extended to the south-east in order to investigate the area that lay outside the pottery workshop, that is, east of the long wall un. 310 (fig. 11). During our excavations, we did not find indications that this area was used for



Fig. 22. Trench 6: enclosed space (un. 515, un. 604), east of potter's workshop (from NW).



Fig. 24. Trench 6: stone blocks and stone concentration (un. 608), south of wall un. 604 visible in the upper right corner of the photograph (from E).

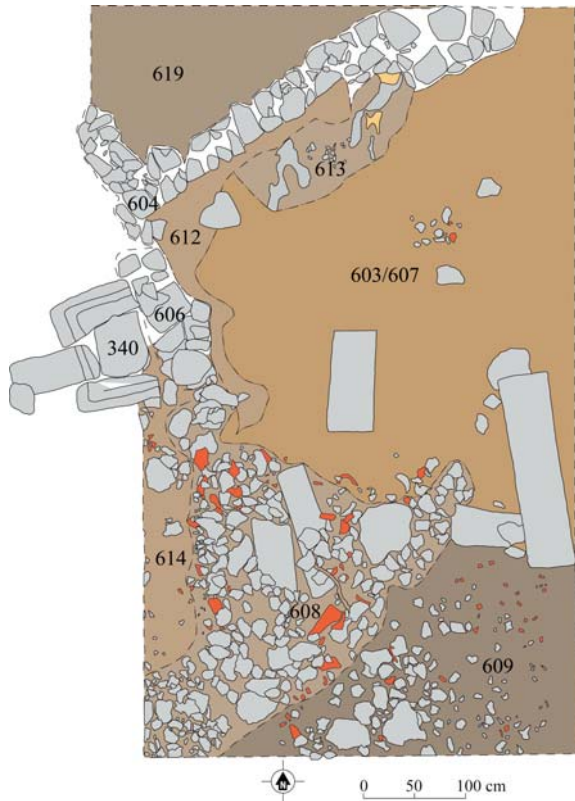


Fig. 23. Trench 6: plan showing area south of wall un. 604 with stone blocks and stone concentration (un. 608).



Fig. 25. Trench 6: two intact amphoriskoi, found under one of the stone blocks.

pottery production. We uncovered three stretches of walls that seem to have formed an enclosed space (see fig. 11: un. 515 and 604) that had the same orientation as long wall un. 310. In the north-west section of this room, parts of the walls were missing, but at a deeper level the foundation trenches in which the lowest courses of stones had

originally been placed, could be clearly discerned, which shows that the walls continued in both directions (fig. 22). Although the enclosed space within these walls produced evidence of one or two floors, the associated finds did not give a clear indication of the function of this room. As these walls and associated floor remains were found at a higher level than long wall un. 310, this room or building appears to have been constructed after this wall had already been built.

The area south of this building yielded finds of a completely different nature. Close to the room's southern wall (un. 604), we first found a strip of compact soil containing lime particles running parallel to the wall, which we interpret as the remains of a surface (un. 602), and indications of a second surface (un. 612; see fig. 23) at a somewhat deeper level. Where these surface remains came to an abrupt end, the soil was considerably less compact. It was in this looser soil (un. 607/





Fig. 26. Trench 6: votive offerings. a. piece of bronze sheet (un. 332 #1004 SF164); b. rim of basin(?) (un. 608 #1529 SF16); c. foot of terracotta statuette (un. 608 #1509 SF13); d.-e. handles with plastic snakes (un. 609 #1528; un. 600 #1505); f. fragments of volute krater(?) (un. 600 #1505 SF6-7).



Fig. 27. Trench 6: votive or ritual vases: a.-b. amphoriskoi (un. 618 #1601 SF63-64); c. small flask (un. 618 #1601 SF62); d.-e. amphoriskoi (un. 608 #1529 SF25); f.-g. miniature vases (un. 609 #1528 SF17, SF 23).

609, and partly in the overlying layer un. 600) that the first of a large quantity of small finds and a series of large, hewn stone blocks came to light. To the west and south-west of this area, a concentration of smaller and bigger stones occurred (fig. 23: un. 608), some of which lay on a surface or floor (un. 612/615/616). As fig. 24 clearly shows, more stone blocks were present within and under this stone concentration. The large stone blocks



Fig. 28. Fragments of matt-painted and other indigenous pottery. Trench 5: a. biconical jug(?) (un. 33 #100); Trench 6: b. shoulder fragment (un. 37 #116); c. krater (un. 618 #1536 SF31); d. base/strainer (un. 618 #1567); e. handle (un. 613 #1546); f. ceramica indigena 'incisa' (un. 626 #1587); g. krater (un. 626 #1578); h. small jug (un. 541 #1360); i. relief decorated ware (un. 585 #1330).

were found lying in random, often sloping positions, some of them on top of each other. Small objects and ceramics continued to be found in considerable quantities in the area of the stone concentration un. 608 and below this (un. 618), as well as in the direct vicinity of the stone blocks (un. 601, 609, 618; fig. 25). Similar types of finds were sometimes discovered at depths that could vary by as much as 0.70 m. Among the finds are loomweights, 'spools' and spindle whorls, metal objects (e.g. an arrowhead, pin and other items of iron, and a bronze pin and plate; see fig. 26a), a piece of a large terracotta washbasin or bathtub (fig. 26b), a foot that must have belonged to a terracotta statuette (fig. 26c) and much pottery. The pottery finds include many special types of vases, a number of which were complete or semi-complete. Amphoriskoi and other miniature vases were especially numerous (fig. 27). Some of these were painted white with additional decoration in red or pink (see e.g. fig. 27a-d). Also notable are two vase handles decorated with plastic snakes (fig. 26d-e). These finds have a wide chronological range, spanning the period from the earlier 7<sup>th</sup> century (see e.g. matt-painted krater: fig. 28c) and the later half of that century (ovoid aryballos: fig. 30e), to the 4<sup>th</sup> century (ribbed black glazed ware: fig. 31f)<sup>20</sup> and even the decades around 300 BC (fragments of a volute krater with added white paint, ca 360-250 BC: fig. 26f). The period in between is covered by 'colonial' wares and what is either Corinthian or imitation-Corinthian pottery.



Fig. 29. Sub-Geometric pottery. a. wall fr. (un. 259 #974); b. skyphos (un. 358 #966); c. skyphos (un. 513); d. flask (un. 608 #1532); e. jar(?) (un. 608 #1532); f. large, open vessel (lebes-krater or stamnoid krater; un. 608 #1532); g. handle of drinking vessel (un. 608 #1532); h. bowl or krateriskos (un. 617 #1535); i. wall fr. (un. 618 #1536); j. wall fr. (un. 618 #1533); k. wall fr. of hydria(?) (un. 1513 #1302).



Fig. 30. (Proto-)Corinthian and (Proto-)Corinthianizing pottery fragments. a. Thapsos cup (un. 618 #1536); b. PC kotyle (un. 27 #82); c. PC kotyle (un. 18 #64); d. PC kotyle (un. 374 #1011); e. ovoid aryballos (un. 609 #1533); f. PC kotyle (un. 358 #982 SF153); g. Early or Middle Corinthian kotyle (un. 601 #1508); h. fr. showing feline, Middle Corinthian(?) (un. 601 #1508); i. fragment showing dancing figure (?) (un. 305 #953).

The position of the stone blocks suggests that they had been deposited in a large pit (fig. 34). This pit was dug, as indicated above, through a number of surface layers that we retrieved to the north, west and south-west of this pit (= un. 602 and un. 612/615/616; at a lower level and beneath the latter: un. 613 and 620 ). The soil in between the stone blocks (un. 607, 609) was homogeneous in colour and texture, as might be expected of material that was used for backfilling this pit.

Ten large stone blocks (A-J) of varying dimen-

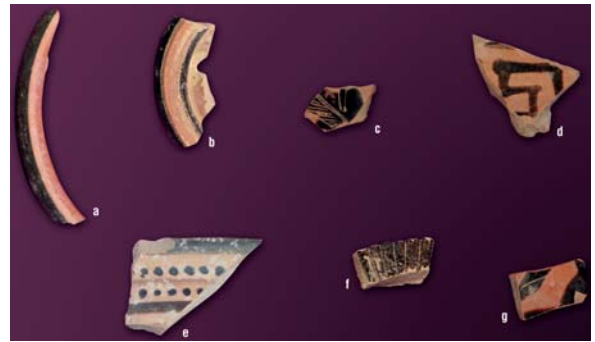


Fig. 31. Black-figure and black glazed fragments. a-b. ring base frs. of Attic-type skyphos (un. 618 #1536); c-d., g. black-figure frs. (un. 600 #1503); e. black-figure fr. (un. 33 #100); f. ribbed black glazed ware (un. 600 #1503).



Fig. 32. Trench 6: stone blocks (un. 618, 620, 624) (from S).



Fig. 33. Trench 6: detail of stone blocks A and B (from N).

sions were discovered (fig. 32). The majority of them clearly belong together, but the question is: what kind of construction were they part of? Block A holds the key to this. It is the most characteristic specimen, combining a long, rectangular section



and a triangular section (l. 1.71, w. 0.46, h. 0.36 m.; figs 32-33). The two short sides of this triangular section are adorned by a stylized cornice or sima, with two sets of acroteria on each side, now partly broken off. At the time of its discovery, faint traces of red and white paint could still be observed on both sides. The width of this block determines how we should reconstruct the original shape of the structure, which must have been either a very narrow or a stepped building.



Fig. 34. Trench 6: digital reconstruction of stone blocks dumped in pit.

Two examples of such a stepped building can be seen exhibited in the garden of the Museo Nazionale della Sirtide di Policoro, Basilicata (fig. 35). Originally they stood inside a *temenos* in the *chora* of Siris-Heraclea. This open-air sanctuary was interpreted by the excavator, D. Adamesteanu, as a heroon for Chalkas, but recently I. Battiloro, A. Bruscella and M. Osanna have attributed it to the Nymphs on the basis of decorated pottery and fragments of terracotta statues that were among the contents of a votive deposit found inside the *temenos*. The stepped structures are identified as bases of an altar (our fig. 35 A-B) and a small *naiskos* (our fig. 35 C-D), respectively. The votive material suggests that the complex was frequented from the first or second quarter of the 4<sup>th</sup> century to the first quarter of the 3<sup>rd</sup> century BC.<sup>21</sup>

With these two stepped cult structures in mind, we attempted to make a digital 3D reconstruction of the structure to which the blocks belonged (figs 36-38). The broken blocks D and I can be comfortably fitted together to form one large block, as can blocks B and H. Blocks D/I and B/H have virtually equal dimensions (l. 1.84/1.85, w. 0.46, h. 0.29 m.); both are carefully worked and have



Fig. 35. Two small cult buildings from sacred area in Siris-Policoro (4<sup>th</sup> century BC), Museo Nazionale della Sirtide di Policoro, Basilicata (front side and back side).



Fig. 36. Trench 6: digital reconstruction of cult building (front view).

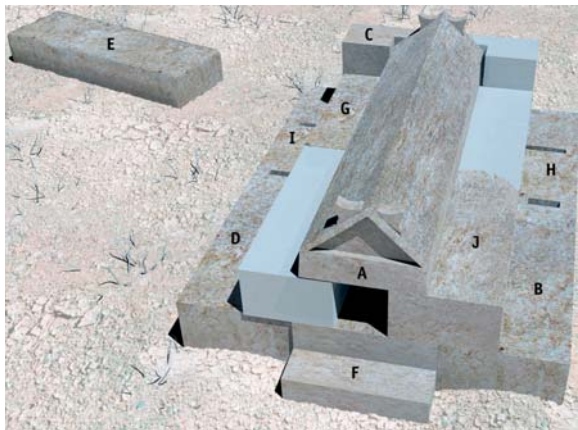


Fig. 37. Trench 6: digital reconstruction of cult building (letters indicate individual blocks).



Fig. 38. Trench 6: digital reconstruction of cult building (back view).

smooth surfaces, and both have a longer and a shorter indentation cut into one side. Block F, which is slightly longer (l. 1.91, w. 0.56, h. 0.28 m), may be placed between them, so that one of its short sides makes a sort of step (fig. 37). Blocks G and J are both broken off and in our reconstruction are restored to function as supports for 'roof block' A. Block C is also broken, but the rebate is almost the right size to accommodate the lower, rectangular section of block A; in our reconstruction, about half of the original block is missing and is digitally restored. Two pieces could not be fit into our reconstruction: block J - which has a very irregular shape and is probably severely damaged - and block E, which differs from the other blocks in that it lacks their worked and smoothened surfaces. Block E was found at a higher level than the other blocks and somewhat eccentric from where the other blocks were concentrated.

We assume that the small finds and ceramics discovered between and around the stone blocks were associated with this cultic building; it is even possible that they were originally stored inside or around it. Many of the finds can be interpreted as votive offerings, especially in the case of the terracotta foot and the miniature vases. In this connection it may be pointed out that some of the vases were painted in the same white and red as 'roof block' A. The building as we reconstruct it, is reminiscent of both a cult building and a stepped tomb. It may therefore be suggested that it was associated with the cult of the dead or with figures belonging to the netherworld. Further support for this is provided by some of the votives. The amphoriskoi and the plastic snakes decorating the vase handles are elements that frequently occur in the iconography related to the cult of the Dioskouroi. For instance, a Late Archaic marble stele from Sparta shows Kastor and Polydeukes with two amphorai between them, standing inside a naiskos, the pediment of which shows two coiled snakes and an egg.<sup>22</sup> The combination of amphorai or amphoriskoi, snakes and the *dokana* (the mysterious attribute or symbol associated with the Dioskouroi) seems to be part of a specific 'Laconian' variety of their cult and iconography that has been attested especially in Sparta and Taras.<sup>23</sup> They represent chthonic aspects of the cult that was centred on the tomb of the Dioskouroi.<sup>24</sup> Important testimony from Taras are the many terracotta plaques (fig. 39) dating to the late 4<sup>th</sup> or early 3<sup>rd</sup> centuries BC that came to light in a votive deposit associated with the cult of the Diokouroi, found close to the Chiesa del Carmine in Taranto-Borgo Nuovo (4<sup>th</sup>-3<sup>rd</sup> centuries BC), and





Fig. 39. Two terracotta plaques showing the Dioskouroi, Museo Nazionale Archeologico di Taranto (published with permission of the Ministero per i Beni e le Attività Culturali - Direzione Regionale per i Beni Culturali e Paesaggistici della Puglia - Soprintendenza per i Beni Archeologici della Puglia).

in a deep pit or well containing material from the second half of the 4<sup>th</sup> century BC, located amidst a number of tombs in Contrada Solito, Masseria Tesoro, near Taranto.<sup>25</sup> The amphorai seem to represent the twins while the amphoriskoi must be directly related to the cult of the Dioskouroi.<sup>26</sup> There is even a direct link between the cult of the Dioskouroi at Taras and the finds from Trench 6 at L'Amastuola. This is formed by a number of amphoriskoi decorated with pinkish-red blobs painted on the belly (fig. 27a-b) that find close parallels in specimens discovered in the same votive deposits as some of the terracotta pinakes just mentioned.<sup>27</sup> Amphoriskoi of the same distinct shape can also be seen on some of these clay plaques.<sup>28</sup> In the context of the apparent connection with the Dioskouroi, we may even suggest that the building that we have digitally reconstructed is associated with the 'subterranean dwelling' of the Dioskouroi that is mentioned by the late 7<sup>th</sup>-century Spartan poet Alkman (fr. 2 Page),<sup>29</sup> or with the tomb of Kastor at Sparta, over which a sanctuary was constructed and where divine honours were paid to 'the sons of Tyndareus' (Paus. 3.13.1). Also of interest in this connection is 'the open tomb', which is referred to by other ancient sources (*Etymologium Magnum*, s.v. 'dokana'). Here, it may be noted that both our reconstructed building and

the two 'cult buildings' at Siris look like tombs and are not entirely closed.

The following reconstruction of events can be made. The earliest datable finds that can be identified as votive offerings indicate that cultic activities in this particular area of the site went back to the first half of the 7<sup>th</sup> century BC. Unfortunately, they do not provide clues about a specific deity or other sacred entity that was venerated. At some point, probably in the 4<sup>th</sup> century BC, a partly subterranean and tomb-like cultic structure was built from large stone blocks, most likely for the Dioskouroi. The place became the focus of intensive cult activities. To judge from the latest datable votive material, the cult came to an end in the decades around 300 BC. This was presumably marked by the demolition of the cult building. A large pit was dug and the stone blocks were dumped in it, together with votives and other sacred objects. In the process, a rubble wall was probably also destroyed (=stone concentration un. 608); this wall may have been a temenos wall or, less likely, may have belonged to another built structure.

After excavating the pit fill and the stone blocks that had been dumped in the pit, we turned our attention to the area around it, which still contained the strata through which the pit had been

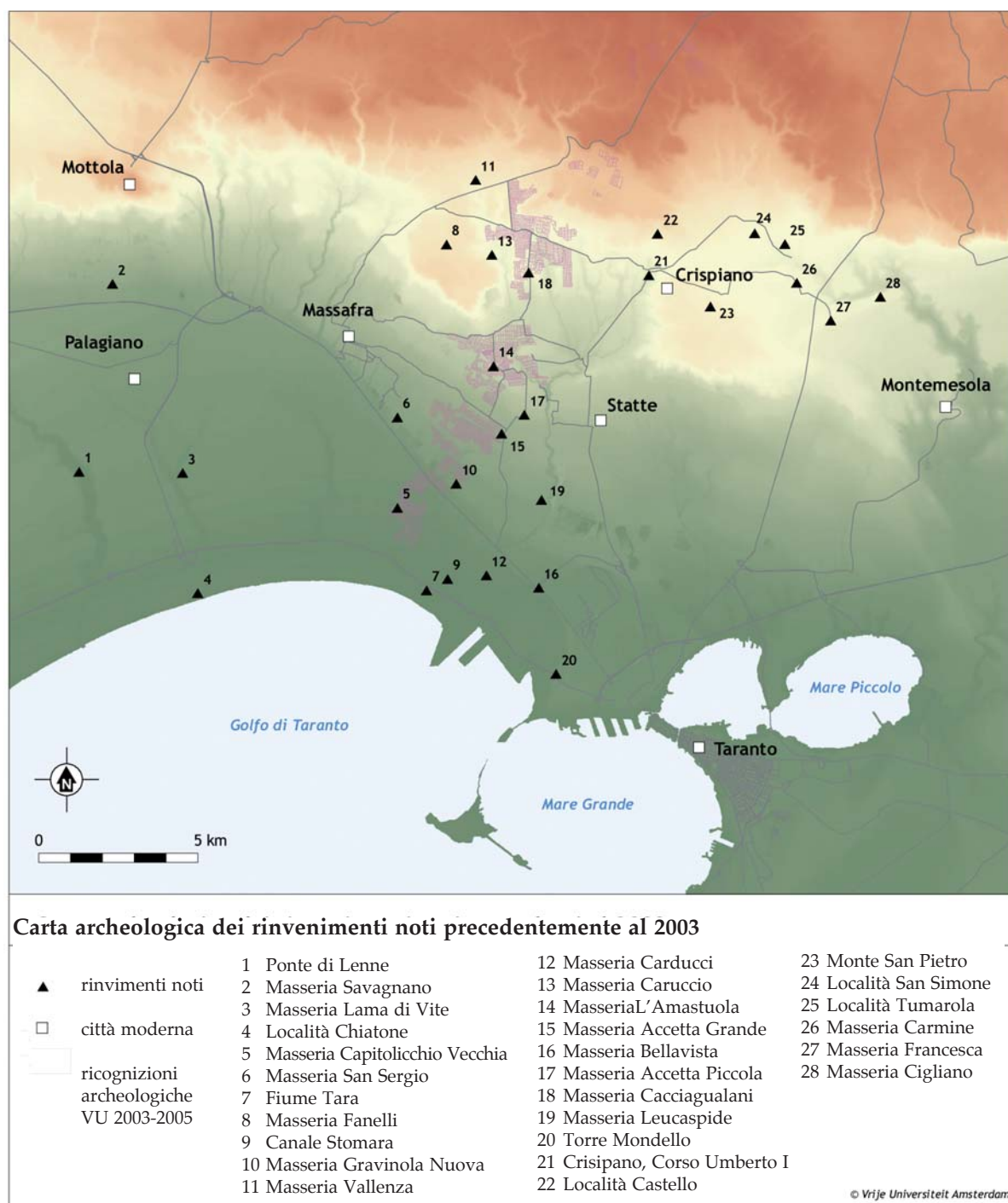
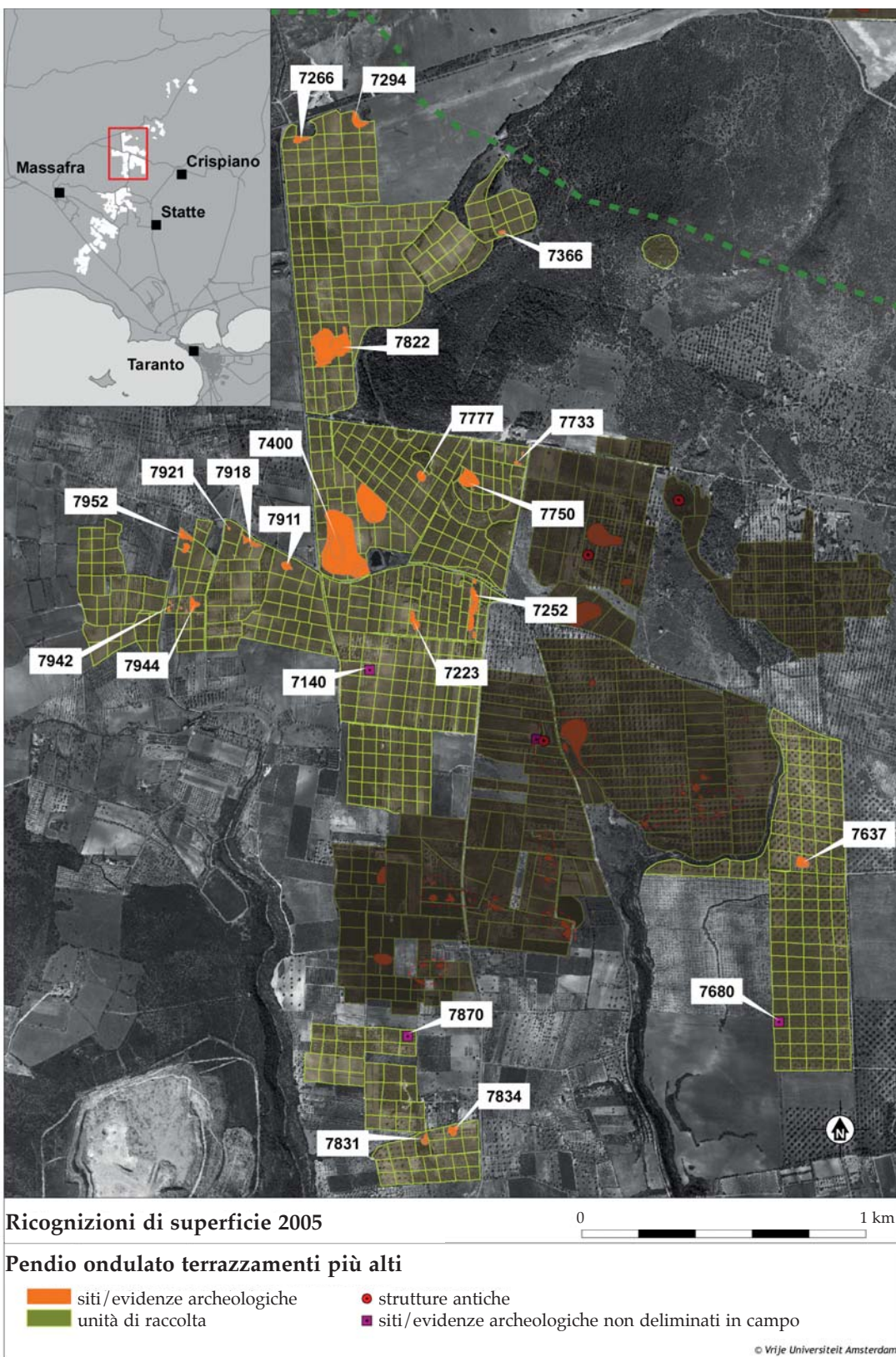


Fig. 40. Archaeological map showing: a. triangles: sites known upto 2003 (numbered); b. violet: grid system surveyed between 2003 and 2005, within a transect crosscutting the land systems of the north-eastern Tarantino (map by Maurice de Kleijn).

Fig. 41. Grid (green) and surface concentrations (orange; numbered) of the 2005 field survey campaign. In the background (shadow) the grid and sites of previous campaigns. Red dot: ancient structure: purple square: known sites not identified in the field (map by Maurice de Kleijn).







dug. The upper layers contained a mixture of colonial wares and *impasto* and matt-painted pottery, but as we dug deeper, the last two categories predominated (including bichrome matt-painted pottery). On two sides and below the actual pit we discovered ashy spots, burnt material (including botanical macro-remains), many bone fragments, burnt clay and large quantities of matt-painted sherds, as well as a bronze pin. The whole area had been severely disturbed, but we think that these were the remnants of an indigenous hut, one or more fireplaces, and a clay oven.

### 3. FIELD SURVEYS AND SATELLITE IMAGES (2005-2010)

In the 2007 *BABesch* report, we discussed the results of the ACVU field surveys carried out in the context of the L'Amastuola project in 2003 and 2004. From 2005, these surveys were extended to include larger parts of the most northern sample area in the Mottola landscape unit, and control surveys were executed to check up on the earlier fieldwork. The Mottola landscape is one of the three major land systems in which we selected and subsequently surveyed sample areas of 1-2 km<sup>2</sup> (fig. 40). Two sample areas were selected in this land system, one covering the immediate surroundings of L'Amastuola, the other the fertile soils of the highest terraces just north of Masseria Cacciagualani (fig. 40 no 18). In 2005, we continued working on the latter area, which still had to be enlarged in order to be comparable with the other sample area. Moreover, an unusually high density of late Classical-Hellenistic rural sites had been encountered here during the previous surveys. It was hoped that the enlargement would contribute to the understanding of the rural organization of this part of the Taranto *chora*.

The basic field surveys here were done in 2005; further extensions and control surveys followed later (fig. 41). As in most of the units already surveyed in this sample area, a continuum of low-density artifact spread was found all over the fields, also in the extension. Amongst this continuum, 22 artefact concentrations stand out either because of their relatively high densities or due to the presence of specific artifact categories, such as ancient funerary wares. Of these, 7 can be dated between the late 5<sup>th</sup> and the late 3<sup>rd</sup> century BC, and another 11 between the late 4<sup>th</sup> and the late 3<sup>rd</sup> century BC. Most of these sites are interpreted as the surface residues of rural farms and adjacent burial plots. The majority are relatively small (ca 200-500 m<sup>2</sup>); a few are larger (ca 1000-5000 m<sup>2</sup>) and occupy dominant locations on hilltops, over-



Fig. 42. The hill top on which S7400 is located.

looking the surrounding countryside. Amongst the latter sites are S7952 (40 x 60 m) and in particular S7400 (fig. 42), which measures approximately 50 x 100 m and is located on the flanks of a hilltop 500 m west of Masseria Pizzica. S7400 overlooks a range of smaller sites in its vicinity, which seem to be organized in a halo around it (fig. 41). It is also amongst the sites with the largest variation in artefact debris. Whilst the smaller sites are composed of tiles, cooking wares and some black gloss pottery, at S7400 the artefacts range from finewares to large storage containers, and from terracotta figurines to ceramic misfires and stackers (which indicate the presence of pottery kilns). Another outstanding feature of this site, and clearly related to the pottery production, is the presence of a spring, at the southern periphery of the site.

Another, even larger site (S7822) is found nearby, approximately 400 m north-west of Masseria Pizzica (fig. 41). It too is located in an elevated position, overlooking in this case a large area to the north, towards the Murge plateau proper. It is the largest site detected in this sample area, covering 150 x 200 m. It originated in the late 4<sup>th</sup> century BC, as did almost all the sites found here. However, it differs significantly from all these sites because of the presence of Roman imperial artefacts and in particular of African red slipwares of the 2<sup>nd</sup> to 4<sup>th</sup> centuries AD. They are found distributed all over the site, whilst the earlier, Hellenistic material is limited to a small nucleus in the centre of the site. The extraordinary dimensions of this site seem to relate directly to an exponential growth of the settlement at some point during the 1<sup>st</sup> or 2<sup>nd</sup> century AD. A similar situation can be observed in the other L'Amastuola sample areas.<sup>30</sup> In the imperial period, however, the extremely dense and dispersed, but hierarchical rural settlement pattern that had come into being in this part of the Taranto *chora* in the late 5<sup>th</sup> and

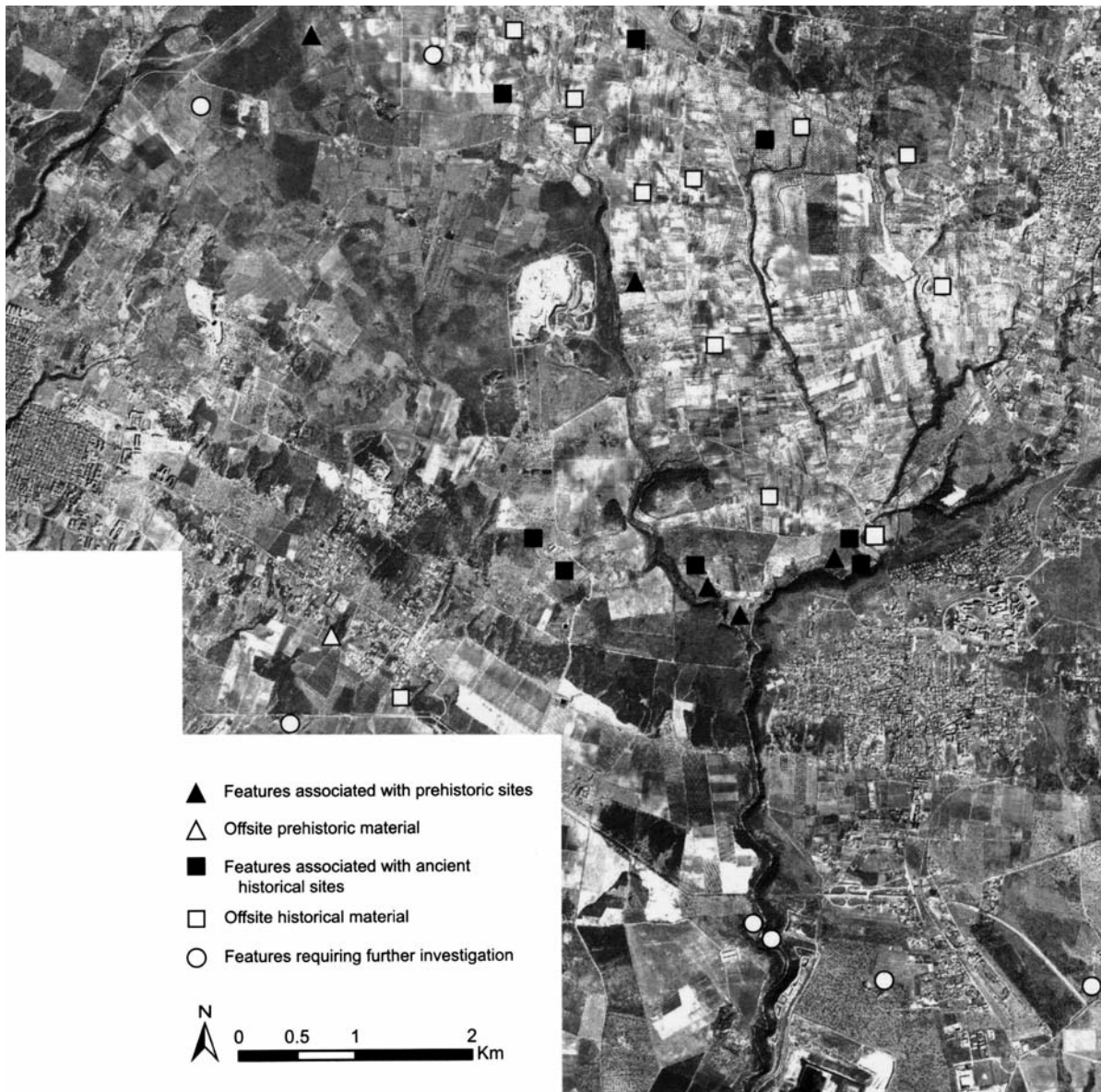


Fig. 43. Satellite image of the L'Amastuola research area analysed in 2007 and 2008 with image features indicated. From Ross/ Sobotkova/Burgers 2009, 431, fig. 5.

especially the late 4<sup>th</sup> century BC, seems to have been replaced by one marked by a few isolated village-like villas.

In 2007 and 2008, the landscape around L'A-mastuola was also investigated by means of an analysis of a high-resolution satellite image. The analysis covered 70 km<sup>2</sup> and was carried out by Dr. Shawn Ross (University of New South Wales) and Dr. Adela Sobotkova (University of Michigan) (fig. 43).<sup>31</sup> This satellite image was used to locate previously unknown archaeological features. The

first stage of this research, which was completed in 2007, involved processing and enhancing the image in order to identify features that were likely to yield archaeological remains on the surface. That season, Ross and Sobotkova analysed 50 km<sup>2</sup> of the image. Ground control executed by the field survey teams then investigated the identified features. During this, the nature of the feature visible in the image was evaluated and archaeological artefacts were sought on the surface. Work continued in 2008 with image analysis and ground



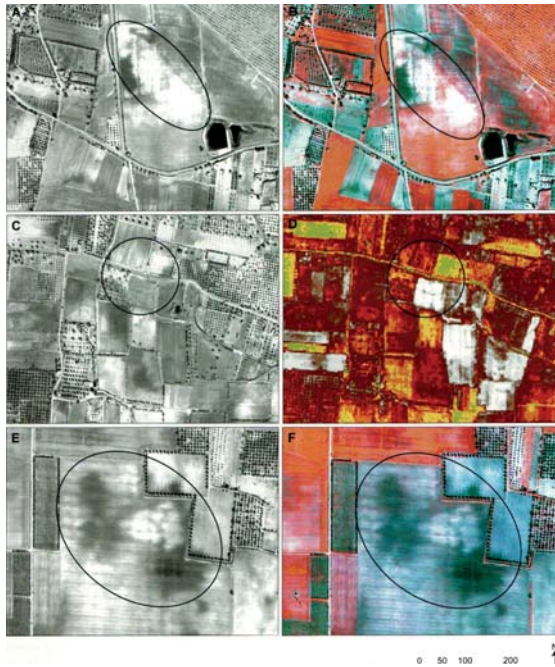


Fig. 44. Features detected in the satellite image. Left column is panchromatic. B) and F) are multispectral (4-1-2 band combination); D) is a Normalized Difference Vegetation Index (NDVI); A-B) Rectilinear feature F1025 (confirmed by ground control as a Hellenistic/Roman site); C-D) Grid pattern F1023, only visible in the 4-1-2 band combination and the NDVI reproduced here (confirmed by ground control as a Hellenistic/Roman site); E-F) Rectilinear feature F1017, a promising anomaly perhaps indicating a buried structure (ground cover prevented confirmation) (from Ross/Sobotkova/Burgers 2009, 429, fig. 3).

control performed on the remaining 20 km<sup>2</sup> of the research area.

The process of analysis was facilitated by the type of imagery used. Quickbird satellite imagery is not only high resolution - about 60 cm in the 'panchromatic' (black-and-white) component of the image - but also 'multi-spectral', that is, it contains four separate colour bands covering red, green, blue and infrared (fig. 44). These four bands can be viewed individually, recombined or otherwise processed to indicate such information as the vigour of surface vegetation or the composition of topsoil.

In all, 114 suspected features were identified in the image and investigated through field survey (fig. 45). Of these features, 29 were associated with surface artefacts; judging by the density of these artefacts, 14 of the features are likely to represent significant archaeological sites; an additional 13



Fig. 45. Comparison of satellite image features and sites found through field survey (2007-2008) in the north-eastern part of the satellite research area. Image features are solid black. The surveyed sites that overlap or fall within 25 m of the remotely sensed features are solid white; false negatives (surveyed sites more than 25 m beyond the image features) are crosshatched. Solid light gray background represents the transect units of the field survey grid (from Ross/Sobotkova/Burgers 2009, 433, fig. 6).

features could not be evaluated because they were inaccessible or overgrown. This success rate (29 of the 105 features investigated associated with surface artefacts) is much higher than would be expected from random chance, demonstrating the usefulness of satellite image analysis for archaeological reconnaissance. Our field surveys, furthermore, indicated that in most cases satellite image analysis did not directly reveal hidden archaeological remains such as buried walls; instead, analysis seems to pinpoint places conducive to past human settlement, such as those that are well watered or easily defensible.

#### 4. EXCAVATION AND OTHER ANALYSES OF THE ARCHAIC NECROPOLIS (2010)

In our previous report on the L'Amastuola project, we briefly discussed the results of a topographic survey we carried out in 2004 and 2005 at the Archaic necropolis, which is located some 800 m south of the L'Amastuola hill. It was first discov-





Fig. 46. Location of the Archaic necropolis.

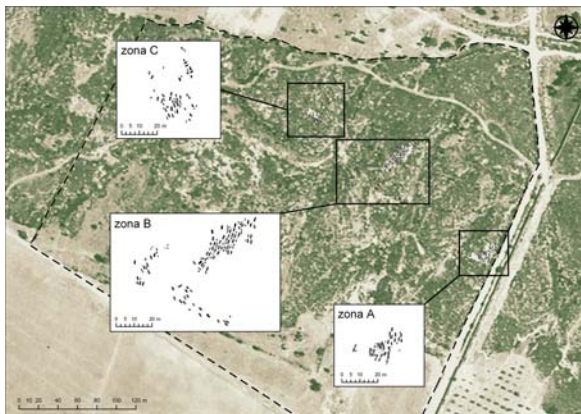


Fig. 47. The three burial plots in the Archaic necropolis identified by Maruggi (map by Jitte Waagen).

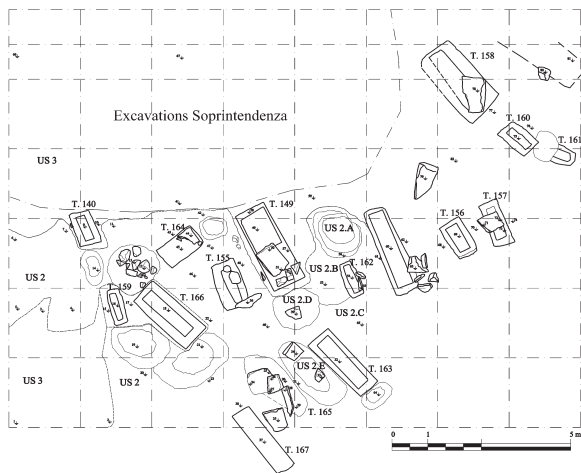


Fig. 48. Plan of the 2010 excavations in area C of the Archaic necropolis (plan by Amadeo Rossi).

ered in 1988 by d.ssa Grazia Angela Maruggi of the Soprintendenza ai Beni Archeologici della Puglia



Fig. 49. The area of the 2010 excavations after removal of the macchia bushes.

(fig. 46). In 2010, these investigations were continued through excavation of one of the main clusters of burials within this cemetery; the excavation was directed in the field by Dr. Alfonso Santoriello and Dr. Amadeo Rossi of the Laboratorio di Archeologia 'M. Napoli' of the Dipartimento di Beni Culturali of Salerno University.<sup>32</sup> Here, we summarize the preliminary results of these excavations, in conjunction with more detailed analyses of the earlier research on the necropolis.

The necropolis is the only one in the L'Amastuola area that has hitherto yielded Archaic tombs. It was first investigated in 1988, when Maruggi identified three distinct burial plots within it, separated from each other by small gullies (fig. 47). Maruggi excavated a sample area within each of these plots. That year saw the excavation of 154 tombs, representing about 15% of the 1000 graves that Maruggi estimated to be present in the Archaic necropolis. Our 2010 excavations were focused on the western sample area she excavated, which is called area C, where the oldest burial hitherto had been found, dated by Maruggi to the second quarter of the 7<sup>th</sup> century BC. Here, the digs were extended both southwards (6 x 16 m) and eastwards (4 x 6 m; fig. 48). The new area investigated has a total surface of 233 m<sup>2</sup>. After removing the thick, spontaneous vegetation cover that is characteristic of the whole necropolis area (typical Mediterranean *macchia* bushes), we found 17 burials (fig. 49). They were all of the *a fossa* type, marked by relatively straightforward shafts (*fosse*) cut into the bedrock to an average depth of 0.50 m (fig. 50). At the top, these shafts are delineated by *controfosse*, that is, shallow cut depressions that served to hold the cover slabs.

Only a few of these cover slabs were still *in situ*; the rest had been either partly displaced or tossed



Fig. 50. Typical a fossa tomb in the Archaic necropolis (photo Amadeo Rossi).



Fig. 51. Detail of T156, showing the top of the one-handled cup (photo Amadeo Rossi).

into the macchia bushes (fig. 49). Almost all tombs had been looted in recent times, with the exception of T155 and T156 (fig. 48). Although their cover slabs were missing, the compactness and texture of the soils accumulated in the tombs indicate that they had not been touched by looters in modern times. Nonetheless, T155 turned out to contain no remains at all - neither bones nor grave goods. It was presumably emptied in antiquity. Another possibility is that the tomb was never used for an actual burial. For T156, however, a burial could be ascertained: the grave seemed not to have been disturbed at all. Unfortunately, only very few bone fragments turned out to have survived, a phenomenon also noted by Maruggi with regard to the other tombs in the Archaic necropolis. Bad preservation conditions have also had their effects on the only burial gift present in T156, namely a small one-handled cup (fig. 51). It was found *in situ* in the middle of the tomb, but upon excavation it crumbled into numerous fragments.

Although a more detailed analysis of this cup has to await restoration, on the basis of the *in situ* examination, it has been preliminary identified as a *coppa a filetti* of local fabric, dating to the 7<sup>th</sup> century BC.

The shafts of both T155 and T156 are relatively small and can be ranged amongst the group of tombs of minor dimensions (9 specimens; max. l. 1.10 m, max. w. 0.70 m), which are probably related to child burials. The other 8 of the 17 tombs excavated in 2010 are large (max. length 2.50 m, max. width 1.00 m) and probably represent adult burials. Of course, due to the absence of skeletal remains or grave goods, these inferences remain hypothetical. This also goes for observations on chronological relations between the tombs. The most that can be said is that the earliest pottery fragment found as a 'left-over' in one of the looted graves is a Proto-Corinthian sherd, whereas the latest fragment, which was discovered in another grave, is a red-figure one. This more or less conforms to the date range of between ca 675





Fig. 52. Photo and drawing of the L' Amastuola stele.

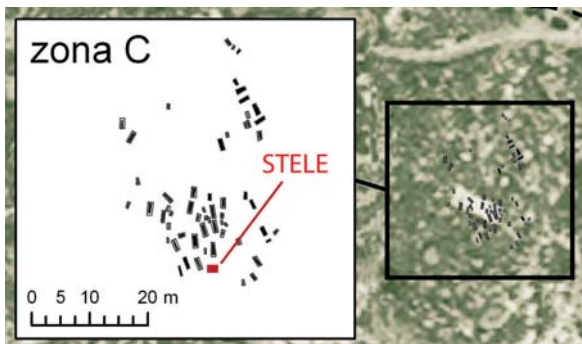


Fig. 53. Location of the find spot of the L' Amastuola stele (map by Jitte Waagen).

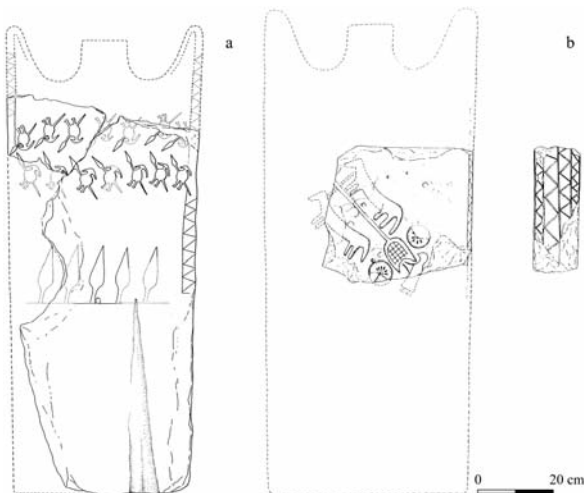


Fig. 54. a. The Messapian stele from Muro Tenente. From D'Andria & Mastronuzzi 2008, 228, fig. 12; b. One of the Messapian stelae from Cavallino (from D'Andria 2005, 37).

BC and the mid 5<sup>th</sup> century proposed by Maruggi for the necropolis as a whole. As to spatial patterning, it must be noted that, with the exception of T164 (orientation E-W), all graves have more or less the same orientation, that is, N-S/NW-SE (fig. 48). They seem to be organized in parallel rows that cover almost the entire excavated surface. Moreover, if we relate area C to the rest of the Archaic necropolis, more observations can be made on spatial patterning, drawing on the detailed topographical survey that we carried out in 2004 and 2005. In those years, we pinpointed 259 tombs (previously excavated by the *Soprintendenza* and/or looted) with the help of a Total Station: 59 in area A, 85 in area B1, 55 in area B2, 58 in area C and a few out of place (fig. 47).<sup>33</sup> As said, these areas are separated from each other by shallow gullies; they all demonstrate a high density of tombs similar to the one excavated in 2010. Moreover, they are all composed of both adult and child burials (ratio of 1:1 on average). There is no evidence of the spatial separation of age groups. This suggests that the various areas constitute the burial plots of separate extended families and that the organization of the necropolis was based on kinship, possibly lineages.

As regards this necropolis, additional observations on social organization can be made in relation to the stele discovered by our team in area C in 2005 (figs 52-53). In 2008, D'Andria and Mastronuzzi published a contextual study of similar stelae that provides new insights into their dating and significance, which is also important for the L' Amastuola specimen. The two scholars classify these stelae as Messapian, distinguishing them from other cippi and stelae found in Magna Grecia;<sup>34</sup> they are found exclusively in indigenous Messapian Salento sites. Among this group are four specimens from Cavallino di Lecce,<sup>35</sup> four from Mesagne<sup>36</sup> and one from Muro Tenente.<sup>37</sup> All these stelae are made of local stone; they have a height of 1.6 m on average and a thickness of between 10 and 15 cm. Like the L' Amastuola specimen, both the fronts and the backs of the stelae are carefully dressed, as are the two slightly concave flanks. At the top, left and right, the stelae carry upward-pointing projections. Moreover, in almost all cases decorative zigzag patterns run all along the borders of the front of the stele, as well as on both flanks. What sets the L' Amastuola specimen apart is the lack of figurative relief decorations, which can be found on the other stelae. Three of the four Mesagne stelae, for instance, are decorated with lances and carts drawn by horses. The same type of decoration is found on one of the



Cavallino stelae (a cart; *fig. 54b*) and on the one from Muro Tenente (three lances; *fig. 54a*). On another stele from Cavallino we see a deer, and above the lances on the upper half of the Muro Tenente example, are two series of seven heavily stylized hoplite warriors, one above the other, the upper one upside down (*fig. 54a*). Because of the activities symbolized by these depictions - namely riding, hunting and war - D'Andria and Mastronuzzi relate them to male elite contexts.<sup>38</sup> In this light, it is significant that on the L'Amastuola stele we find a belt-like decoration instead of the above 'male' symbolism, suggesting an interpretation of the stele as representing a female figure.

In the case of the L'Amastuola stele, its presence in the midst of an extensive necropolis suggests that it was closely related to funerary practices, at least if one excludes the possibility that the stele was brought into the necropolis as *spolia* in a later phase; an interpretation as grave markers has also been given for the other stelae.<sup>39</sup> More problematic is the dating of the Messapian stelae. The only ones found in stratigraphical contexts are those excavated in Via Castello at Mesagne by d.ssa Assunta Cocchiario of the *Soprintendenza ai Beni Archeologici della Puglia*. Here, they were found on top of a mound of stones, identified by the scholar as part of the defensive wall of the Iron Age settlement. The context is dated to the later 8<sup>th</sup> century BC, which, accordingly, is argued to constitute a *terminus post quem* for the dating of the Mesagne stelae.<sup>40</sup> If this dating also holds for the L'Amastuola stele, it is likely to relate to the earliest, pre-Greek settlement on the hilltop. However, in that case, what is surprising is its location some 800 m south of the settlement, in an area not yet used for burial purposes (note that the earliest tombs found here date to the second quarter of the 7<sup>th</sup> century BC) and that is void of other traces of contemporary human activities. It is possible that commemorative stelae were erected in this area, in relation to funerary rites that did not leave any archaeological traces. However, an important argument against such a hypothesis is the fact that hitherto no similar contexts have been attested in the indigenous Salento world, which stands out for the particularly close vicinity of settlement and burial plots. In this light, one must also consider a later date for the L'Amastuola stele. This is strengthened by D'Andria and Mastronuzzi's study of the other stelae.<sup>41</sup> On the basis of a comparison of the stylistic characteristics of the figurative representations with those present on indigenous figurative pottery, they date the stelae to the period between the second half of the 6<sup>th</sup> and the early

5<sup>th</sup> century BC.<sup>42</sup> In the case of the L'Amastuola stele, this is clearly not the soundest evidence, since the decoration of this particular specimen is limited to a simple belt. However, the late date is much more in line with the chronological context of the necropolis as a whole, viz. between the second quarter of the 7<sup>th</sup> and the mid 5<sup>th</sup> century BC; in this necropolis the stele is, indeed, likely to have functioned as a grave marker, most probably in the burial plot of area C.

## 5. PRELIMINARY CONCLUSIONS

Here, we first give a brief update on the analysis of the pottery found during the excavations. Most of this section, however, is devoted to our conclusions regarding the main themes of our research project, which revolve around the question how indigenes and Greeks interacted in this part of southern Italy in the period between the 8<sup>th</sup> and 5<sup>th</sup> centuries BC.

### 1. Pottery analysis

Much of the pottery found during the 2007–2008 campaigns fits within the ceramic spectrum known from the earlier seasons. For instance, another Thapsos fragment was found (*fig. 30a*), which together with Corinthian Late Geometric finewares and perhaps some of the Corinthian type-A amphorai belongs to the earliest imports at the site.<sup>43</sup> There are, however, two important pottery groups (located at either end of the ceramic spectrum) that until now were less well represented. The first is the complex of Sub-Geometric finewares that form a unity in terms of context and function and were probably deposited in one ritual action (*fig. 14*; cf. *fig. 29*) in the north part of Trench 6.<sup>44</sup> The Sub-Geometric pottery provides good parallels to material from L'Incoronata, Metapontion-Andrisani and Siris.<sup>45</sup> Among the recently found pottery dating to the 7<sup>th</sup> century BC, there is a Sub-Geometric fragment that bears figurative decorations, although it has no clear parallels in L'Incoronata, Metapontion or Siris (where figurative Sub-Geometric pottery is more plentiful) but shows a bird executed in what may be called Euboio-Boiotian tradition (*fig. 29i*).<sup>46</sup> These finds support our earlier observation that both the indigenous matt-painted and the 'colonial' wares of the 7<sup>th</sup> and 6<sup>th</sup> centuries indicate that L'Amastuola in this period shows an orientation towards the region of L'Incoronata and Siris,<sup>47</sup> and belonged to the same 'cultural region' or contact zone as the Materano. The ceramic links with the Tarentines seem to be less strong, although

in this connection it is fair to admit that we have less information about what, for instance, 7<sup>th</sup>-century pottery from Taras looks like. The other pottery category that is now more strongly represented are finds from the 4<sup>th</sup> to early 3<sup>rd</sup> centuries (*figs* 26*f*, 27 and 31*f*). Although the majority do not come from well-stratified contexts, they can be associated with the large stone blocks and therefore with the cult that continued to flourish in this part, while the settlement on the south terrace had ceased to exist.

The potter's workshop excavated in the south-central part of Trench 6 suggests that in this part of the settlement pottery production took place on a considerable scale, perhaps as early as in the 7<sup>th</sup> century (phase 1). Especially in its second phase, the workshop is one of the best preserved in the Archaic Greek world.<sup>48</sup> It combines a number of features that are also known from other pottery production sites. As can be expected, it is located on the periphery of the settlement.<sup>49</sup> The long wall constructed during the beginning of this phase formally delineated this working area, as was sometimes also the case at other pottery production sites.<sup>50</sup> During the workshop's second phase, the clay was processed in the levigation tanks and the two rounded basins in the south-east corner of the workshop. The round or keyhole-shaped kilns belong to Cuomo di Caprio's type 1, which is a shape common in the Archaic and Classical periods.<sup>51</sup> In contrast to some other known pottery production sites, we did not find dumps of wasters or other production discards. The few misfires that were found in this area show that this workshop was (or that neighbouring workshops were) involved in the production of finewares.<sup>52</sup> However, a closer examination of the test pieces from the same trench<sup>53</sup> might reveal that not only tablewares were manufactured. John Papadopoulos in his comprehensive study of the evidence of pottery production in the area of the Classical Agora at Athens illustrates a great number of test pieces from very different periods.<sup>54</sup> What these Athenian and other specimens have in common is that scraps of damaged pottery were very often used (identifiable as test pieces because of the draw-holes cut into them before firing). They were placed inside the kiln and withdrawn with hooks at intervals during the firing in order to test the progress of the kiln.<sup>55</sup> We may deduce from this that, quite naturally, a close relation existed between the character of the test pieces and the material that was produced. Taking this idea further and observing that the L'Amastuola pieces are square and rather thick, we suggest that they were meant for testing products of a related shape, namely roof tiles. The test

pieces in question show that they were also used for testing how the colour on the clay surface came out during the firing process. This is not a counter-argument against their connection with tile production, as a number of painted tiles were found at L'Amastuola (see *fig.* 55). Moreover, the colour of the clay of the test pieces (either orange or buff to yellow) corresponds to that of the tile fragments that we find in our excavations.<sup>56</sup> The L-shaped stack pieces or kiln firing supports found in association with the L'Amastuola pottery workshop<sup>57</sup> can perhaps also be considered especially useful for stacking tiles in the kiln. Apart from these, we also have stack pieces that resemble miniature vases and that are likely to have been used for firing pots. Anyway, the levigation tanks and the two rounded basins just mentioned are of too limited capacity to allow the processing of the large amounts of clay necessary for the production of tiles,<sup>58</sup> but seem to suit the production of pottery. The production of vases required a good supply of water and this applies even more to the manufacture of tiles. At many other contemporary potters' workshops we find the appropriate infrastructure for this (water conducts, basins, etc.),<sup>59</sup> but how the water supply on L'Amastuola's south-terrace was organized remains somewhat enigmatic, especially since the subsurface of dolomite does not retain rainwater (there are no wells at L'Amastuola; the modern masseria on the hill top used cisterns). It is possible that water was transported all the way from the Gravina di l'Amastuola to the east of the site.



*Fig. 55. Painted roof tile, found in colluvial layer (Trench 6, un. 257 #583).*

## 2. Greek–indigenous relationships

Nothing is known about the origins of the indigenous groups that settled at L'Amastuola, probably during the late 8<sup>th</sup> century BC. Nor, for that matter, is anything known about the precise origins or background of the Greek settlers who arrived at L'Amastuola one or two generations later. The earliest pottery of Greek type is not very informative in this respect. As noted in the preceding section, the Sub-Geometric pottery that forms part of the ritual deposition found in Trench 6 has good parallels in material from L'Incoronata, Metapontion-Andrisani and Siris. This large and coherent lot gives a general idea of the settlers' cultural horizon but does not provide clear indications of their homeland. The one-room houses provide parallels to the eastern Aegean (e.g. at Emporio on Chios and Smyrna),<sup>60</sup> which is also the region from which, according to the literary tradition, the colonists of Siris came; on the other hand, this house type is too unspecific to base far-reaching conclusions upon.

In the course of the 7<sup>th</sup> century, the indigenous elements in the local material culture at L'Amastuola waned, in favour of what is usually called 'Greek' culture. This is visible in a number of domains. Handmade matt-painted and *impasto* pottery stayed in use for much of the 7<sup>th</sup> century, along with wheelmade wares that stand in a Greek tradition;<sup>61</sup> these became dominant in the course of the later 7<sup>th</sup> and the 6<sup>th</sup> centuries and were produced on the spot, perhaps as early as the 7<sup>th</sup> century. A similar situation exists in the domain of domestic architecture (*fig. 57*): during the 7<sup>th</sup> century, rectangular houses existed next to curvilinear huts, as is indicated by the hut remains found in Trench 2. There seems to have been a 'smooth' transition from huts to houses, as is indicated by our discoveries in 2008 in Trench 5: the oval hut that was found here appeared to have been replaced by a rectangular stone dwelling(?), probably in the later 7<sup>th</sup> century. There were no signs that the hut had met a violent end. In fact, more or less the contrary is true, since some of the hut's foundation stones had been dug up and re-used for constructing the house. Its location in exactly the same place and its similar orientation suggest that hut and house represent two consecutive phases of continuous inhabitation at this particular spot; this is also suggested by the pottery assemblages of both phases which are largely comparable. This should warn us once more against interpreting these different types of dwellings entirely in ethnic terms.

This brings us to the question of the degree of social and cultural integration, and to the adherence to traditions and identities or the redefinition of identities. Although Greeks and indigenous peoples seem to have started to live at L'Amastuola on an equal footing, the archaeological evidence suggests that in this early period integration varied according to the occasion or context. In the ritual or cultic sphere, we have the two depositions of pottery fragments and burnt material in two locations that are some 22 m apart from each other: one inside an indigenous hut (Trench 2), where predominantly matt-painted wares (and an isolated colonial Greek vase fragment) were found,<sup>62</sup> and the other in a hypaethral setting, where Sub-Geometric dinner wares and a minority of matt-painted vessels were used (above, part 2: Trench 6). The two depositions are more or less contemporary and the ritual in question seems comparable (i.e. communal eating and drinking, food sacrifices and the ritual destruction of dining equipment). In both cases, the selectivity in types of pottery that are employed seems to be significant and may be connected to differences in the composition of the groups involved in the celebrations or to differences between the (presumably supernatural) entities that were venerated or the occasions that were celebrated. This seems to stem from differences in cultural or ethnic affiliations or identities. Or, to put it simply, during this early stage of contact or cohabitation, Greeks and indigenous populations had their own celebrations, or may have celebrated together, but then performed rituals in accordance with each other's traditions.

The cemeteries also provide important evidence of Greek–indigenous relationships and, more in general, of the social structure of the community of the living at L'Amastuola. The 2010 excavations in the Archaic necropolis suggest that much information can still be retrieved from systematic research of this site, despite the heavy looting that has taken place in the past; some of the tombs appear intact and even looted burial plots can be studied for general patterns as well as for specific items, such as a single stele. With regard to general patterns, we have concluded that, for instance, the various, spatially separated burial areas that can be identified in the Archaic necropolis constitute the burial plots of family groups (possibly extended families), and that segmentary social structures are among the guiding principles in the organization of the necropolis. Another pattern that must be discussed is the presumed Greek character of the burial customs,



suggested in particular by the frequent occurrence of Corinthian pottery as grave goods, as reported by Maruggi. First of all, it still has to be established to what degree this pottery is indeed imported or whether it is imitation, perhaps locally made. Even more important is that Corinthian and, more in general, 'Greek' pottery is a common category of the funerary assemblages in many indigenous and colonial-Greek cemeteries. At the same time, we find that this pottery is extremely rare in the domestic contexts at L'Amastuola (see *fig. 30*), whereas other types of Greek imports and local products in the same tradition occur abundantly. Corinthian pottery apparently had distinct funerary connotations. We are probably wrong to evaluate this pottery in ethnic terms. It is more likely that in the Italic world, for Greeks and natives alike Corinthian ceramics were connected primarily with ideas about what was proper burial. We may say that Corinthian or Corinthian-style pottery was part of a supra-local 'burial language' or shared 'funerary idiom'.<sup>63</sup>

As to specific items, moreover, particularly intriguing is the presence of a Messapian stele in the necropolis. The stele suggests that some individuals at L'Amastuola had chosen to add a native touch to the common supra-local burial language. This may have been done to, for instance, emphasize the indigenous background of some of the community's members, whether this was sought in the 'deep' past going back to the settlement's origins, or in the present, if the deceased originated from a contemporary 'Messapian' community that maintained links (e.g. intermarriage) with the community at L'Amastuola. Whatever the case, it may be beneficial to bear in mind that this stele presumably also referred to aspects of the deceased's social identity other than ethnicity. Conspicuous grave markers of this kind were probably reserved for a restricted group of people and are likely to have also expressed high status. In brief, we may consider the L'Amastuola stele an expression not only of ethnic identity but also of gender, status, elite solidarity with peer groups in indigenous Salento, and amity and connectivity with a world outside the own community.

### 3. Indigenous and colonial landscapes

The field surveys carried out since 2005 in the Mottola landscape north of L'Amastuola have confirmed the picture of a very high density of rural settlement in the L'Amastuola countryside, as already indicated by our earlier surveys. They also point to the early Hellenistic period as the

booming phase of rural presence, with a take-off in the late 5<sup>th</sup> century BC. In comparison, the Roman period is under-represented in the surface debris of the sample areas. Even more evident is the relative dearth of Iron Age and Archaic traces in the ACVU transects: the only Iron Age and Archaic site identified hitherto is that of the hill of L'Amastuola and its adjacent necropolis. It has to be emphasized, however, that in this part of the Taranto hinterland Archaic finds have been reported in the past. This goes, for instance, for several locations on the coastal plain near the estuary of the Tara rivulet (*fig. 40*, no 7), for example the *località* Bellavista, Ausonio and La Croce. Here, occasional finds of tombs are recorded that are said to have contained 'Greek', Proto-Corinthian and later ceramics.<sup>64</sup> Moreover, the Taranto museum is reported to have discovered at the beginning of the 20<sup>th</sup> century an Archaic necropolis in *località* Gravinola (*fig. 40*, no 10) containing Corinthian pottery and Attic black-figure vases dating between the late 7<sup>th</sup> and the end of the 6<sup>th</sup> centuries BC. Other 'Greek' necropoleis with Archaic grave goods are said to have been found near the Accetta Grande, Accetta Piccola and Leucaspide masserie (*fig. 40*, nos 15, 17 and 19).<sup>65</sup> Most recently, the presence of such early burial plots has been confirmed in the case of the *località* Capitolicchio Vecchia, Gravinola Nuova and Carducci (*fig. 40*, nos 5, 10 and 12). Here, an extensive necropolis was detected thanks to excavations carried out in 2001 and 2002 by the *Soprintendenza ai Beni Archeologici della Puglia*. The 83 tombs excavated in those campaigns date between the early 6<sup>th</sup> and the 4<sup>th</sup> centuries BC.<sup>66</sup> All these finds are echoed elsewhere in the northern Taranto hinterland, and we must conclude that small Archaic cemeteries were present in significant numbers. One of these sites is L'Amastuola (*fig. 40*, no 14).

Nevertheless, the fact that our systematic pedestrian field surveys, carried out in large sample areas throughout the landscape, produced only a handful of Archaic artefacts outside the immediate L'Amastuola perimeter, should warn us against overemphasizing the above incidental reports. This is especially so because the surveys detected numerous non-Archaic artefact scatters, even poorly diagnostic Bronze Age impasto sherds. We conclude that the density of Archaic sites in this landscape is relatively low and that the settlement pattern in this phase is of the nucleated type, being organized in a series of spatially separated villages.

As we suggested earlier,<sup>67</sup> the change in settlement type at L'Amastuola and the infill of the rural landscape around the site after the mid 5<sup>th</sup>

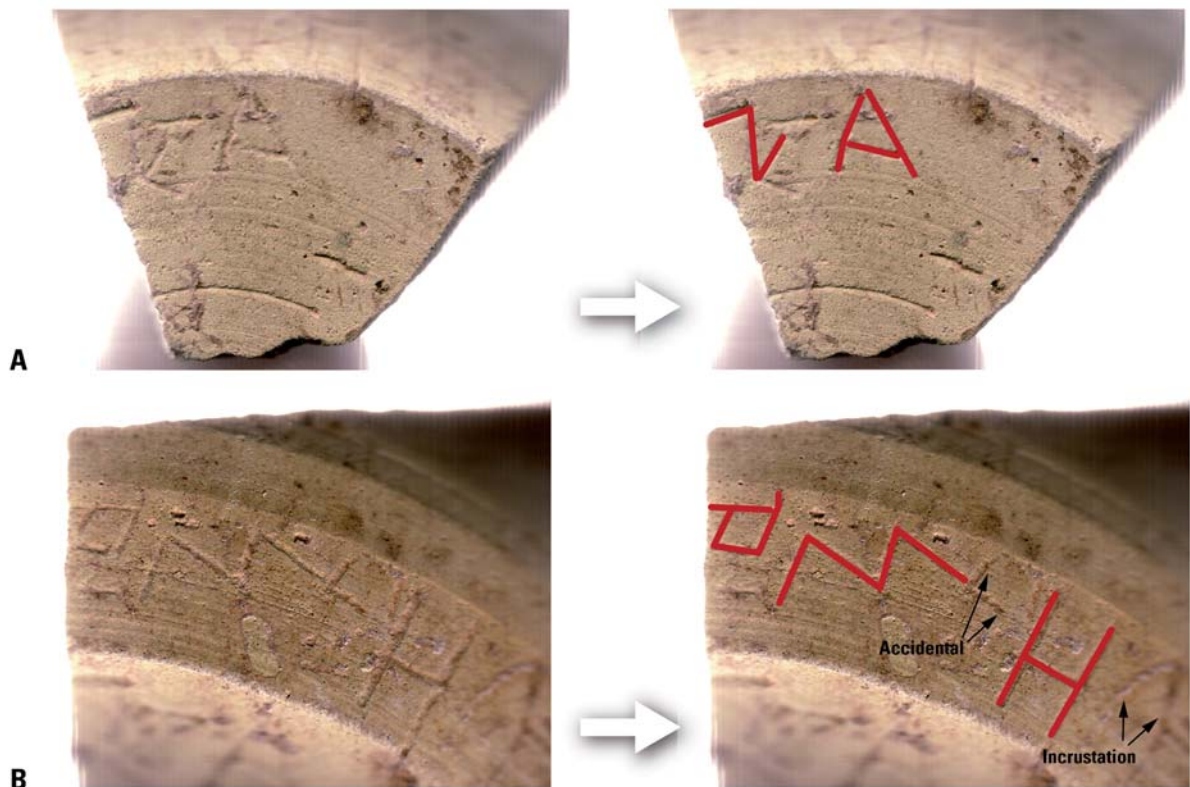


Fig. 56. Graffiti on lower part and base of small vessel, probably of local manufacture (Trench 2: un. 235 #563 SF13).

century - culminating in the early Hellenistic period with its very high density of rural settlement (see above) - may be related to the northward and westward expansion of the Tarentine *chora*. In this context, the find of the large stone blocks in the south-east part of Trench 6 on the south terrace of L'Amastuola, which can be attributed to a destroyed cult building, is particularly revealing. The construction of the subterranean cult building and the installation of a cult of the Dioskouroi, probably at a spot that already fulfilled cultic functions, followed closely upon the restructuring of the site in the late 5<sup>th</sup>/early 4<sup>th</sup> century. As a working hypothesis, we suggest that this act also belonged to the Tarentine takeover of L'Amastuola, possibly to mark that the site was now part of the Tarentine territory. Perhaps the destruction of the monument, probably at some time during the early 3<sup>rd</sup> century BC, is associated with the Roman conquest of southern Italy. The burying of the blocks might be taken to symbolize the clearance of signs of Tarentine domination in the area.

#### CONCLUDING OBSERVATIONS: GREEKS AND INDIGENES AT L'AMASTUOLA

The earliest preserved architectural remains and other artefacts found in stratified contexts present a picture of an apparently thriving indigenous community living in oval huts, protected by a defensive system constructed according to local insights, and using pottery made in an indigenous tradition. Presumably from ca 675 BC onwards, we find alongside these huts and within this indigenous defensive system Greek-type rectangular houses (fig. 57). Together they are evidence of a mixed community. Pottery assemblages tell a similar story: Greek vase types existed next to indigenous ceramics; the latter remained in use down to the later 7<sup>th</sup> century BC. In contrast to earlier interpretations, we see clear indications not of Greek aggression against indigenous inhabitants, but of prolonged and presumably peaceful cohabitation between indigenes and Greeks. After the later 7<sup>th</sup> century, the manufacture of pottery and domestic architecture in an indigenous tradition disappeared. Rectangular house types



Fig. 57. L'Amastuola, south terrace: structures belonging to successive occupation phases.  
Dotted lines: hypothetical.

and types of pottery that we as modern archaeologists identify as 'typical Greek' became the standard. One possible interpretation is that Greek culture gradually became dominant, but it is equally justifiable to conclude that initial cultural differences became gradually more diffused. To put it simply, after one or two generations the originally mixed indigenous-Greek community at L'Amastuola gradually forgot about its roots. L'Amastuola was one of a series of settlements that developed in the coastal area around the Gulf of Taranto and included L'Incoronata, Siris-Polieion, Metapontion-Andrisani/Lazzizzera and, slightly later, Termito.<sup>68</sup> These settlements shared certain elements of material culture, and it seems likely that the cultural identity that developed among the members of the community at L'Amastuola was shaped in relation to and in communication with these other settlements. The Materano type of matt-painted pottery at L'Amastuola indicates that this development had already started in the 7<sup>th</sup> century. If we are allowed to draw conclusions on the basis of the distribution of regional styles of pottery, we may say that during the 7<sup>th</sup> century L'Amastuola belonged to the same 'cultural region' or contact zone as the Materano. The 7<sup>th</sup>- and 6<sup>th</sup>-century pottery in Greek style could show a similar orientation towards the region of L'Incoronata and Siris. This outward-looking tendency becomes stronger especially during the 6<sup>th</sup> century. For example, the development towards more complex

and functionally diversified house plans, the use of relief-decorated storage vessels<sup>69</sup> and the adoption of alphabetic writing (fig. 56) do not seem to have been part of the inheritance of the earliest Greek settlers, but must have been adopted as part of general trends that are also manifest elsewhere in south-east Italy and, indeed, the Mediterranean. It is important to realize that this material culture did not stand by itself but carried with it a whole world of ideas. More complex house plans were connected with notions of gender segregation<sup>70</sup> and relief-decorated storage vessels with the notion of conspicuous storage, signalling wealth and power derived from the control of surplus.<sup>71</sup> The identity of the community at L'Amastuola was at this point in time communicated in the context not of the past but of the interconnectivity with the contemporary world around it.

We may try to place the developments at L'Amastuola from the late 8<sup>th</sup> to early 5<sup>th</sup> centuries in a somewhat wider interpretative framework. There is no denying that during this first generation of cohabitation (after ca 675 BC) there must have been differences in cult, language, diet, use and production of pottery, and other habits between the indigenous and Greek settlers. However, there also must have been many communalities and some kind of social and cultural continuum that made cohabitation possible. Therefore, the question that we should pose in the case of L'Amastuola and comparable sites is not so much whether,



for instance, linguistic or cultural differences existed, as whether these formed impermeable boundaries. The answer to this question seems to be in the negative. Our study of the archaeological finds of the later 7<sup>th</sup> and 6<sup>th</sup> centuries allows us to conclude that the following generations saw a cultural fusion or - in the terminology of post-colonial approaches to Greek 'colonization' - went through a process of integration, accommodation and hybridization, resulting in a colonial 'middle ground' and a new, 'third culture'.<sup>72</sup> It is likely that a 'middle ground' was also found in the domain of immaterial culture: for the period under discussion there are, for instance, some interesting hints at bilingualism and the use of indigenous linguistic idioms in southern Italy and Sicily.<sup>73</sup> In this connection of multiple cultures within colonial settings, Maurizio Giangiulio prefers to think in terms of what he designates 'volatile overlappings' and 'intertwinings of identities and practices'. Giangiulio proposes a model of culture contacts in which different cultures exist next to each other and individuals possess the flexibility to combine elements of these cultures or switch from one culture to another (and back), depending on context and circumstances.<sup>74</sup> The archaeological material from L'Amastuola provides grounds to assume that multiple identities indeed existed. The stele in particular shows that some kind of awareness of ethnic diversity was present or continued to be present until a point in time long after the establishment of the settlement. But this apparently did not pose a problem. The stele is a telling example of the multiplicity of identities and of multilayered identities. It must have been a conspicuous statement that L'Amastuola was a place where ethnic boundaries were weak: multiple identities and varied senses of membership coexisted; the identities were changeable and not ethnically salient.<sup>75</sup>

The consequence of a post-colonial approach to Greek 'colonization' is that we must be more hesitant to describe or interpret phenomena in the sphere of cultural encounters, exchanges and socio-political developments in oppositional, ethnic terms. We should reconsider to what extent and for which cases such catchphrases as 'Greek colonists and indigenous populations', 'Greek traders in native contexts', 'Greek-indigenous encounters', etc. are appropriate characterizations of the phase that follows first-contact situations. Such dualistic labels are based on the *a priori* assumption that ethnic differentiation was the most salient line of demarcation. It would be rather one-sided or naive to think that being Greek or being

indigenous would have been the only, or the most important category of social identity. Instead of a static dichotomy, we should think in terms of the fluidity and multiplicity of identities. Moreover, most scholars now agree that it was only in the 5<sup>th</sup> century that Greeks started to develop ideas about ethnicity that envisaged an oppositional rather than aggregative notion of other ethnic or cultural groups, bringing with it relatively sharp boundaries between the Self and the Other.<sup>76</sup> And even in this period ethnicity was only one of many possible forms of group identity, which was not always given prominence but was expressed in specific situations; it was not a static, ascribed aspect of people's lives: it was contested, negotiable and subject to change. On the whole, it is probably more correct to give more credit to local or regional entities and identities in our attempts to explain the sociocultural dynamics in Archaic southern Italy.

#### NOTES

- \* The L'Amastuola project is directed by Gert-Jan Burgers (field surveys) and Jan Paul Crielaard (excavations). Staff members: Bert Brouwenstijn (object drawing, photography and digital reconstructions) and Jaap Fokkema (surveyor). Other team members: Dorota Biesiekirska (analysis of survey pottery), Daphne Lentjes (botanical analysis) and Edwin de Vries (analysis of pottery from 2007-2008 excavations). Trench supervisors during the 2007-2008 seasons: Tessa Beukelaar, Ruben Brugge, Timothy Frese, Christien Heethuis, Stefan Kooij, Ilona Venderbos and Jeroen Weterings; Anne van Hilst acted as assistant site supervisor and trench supervisor. Field survey supervisors: Francesca Laera (2005), Merel Schoen and Nadir James (2007/2008), Maurice de Kleijn and Dorota Biesiekirska (2010). Supervisor of the necropolis survey in 2004 and 2005: Jitte Waagen. Directors of the necropolis excavation in 2010: Amadeo Rossi and Alfonso Santoriello. The satellite image analysis was conducted by Shawn Ross (University of New South Wales) and Adela Sobotkova (University of Michigan). The fieldwork was sponsored by the Faculty of Arts of VU University Amsterdam, the Netherlands Organization for Scientific Research (NWO) and the *Laboratorio di Archeologia 'M. Napoli'* of the *Dipartimento di Beni Culturali* of Salerno University (in 2010). We are grateful to the various team members and organizations for their contributions to the project. We also wish to thank all students and other volunteers for their invaluable help in the field, and Douwe Yntema for sharing with us his expertise in virtually every kind of pottery. Drawings and maps for this article were produced by Bert Brouwenstijn and Jaap Fokkema, unless otherwise stated; we thank them for their outstanding work. In Italy, our gratitude goes to the municipality of Crispiano for the hospitality shown to us, and to the *Società Kikau* for letting us excavate its fields. We are also particularly grateful for the constant collaboration of our colleagues of the *Soprintendenza ai Beni Archeologici della Puglia* and of the *Scuola di Specializzazione in Archeologia Classica e*

Medievale 'Dinu Adamesteanu' of the University of Salento at Lecce. Last but not least we wish to express our gratitude to the late d.ssa Grazia Angela Maruggi of the *Soprintendenza ai Beni Archeologici della Puglia* for her kind permission to continue fieldwork at the site that she discovered and investigated first.

- <sup>1</sup> Burgers/Crielaard 2007. Brief reports have appeared in *Taras* 24, 2004 and following issues. See further Burgers/Crielaard 2008; Crielaard/Burgers 2011; Burgers/Crielaard 2011 and in press. The archaeobotanical data were analysed by Daphne Lentjes as part of her PhD thesis, titled *Man, Settlement and Landscape: Land Use Developments and Settlement Dynamics in First Millennium BC South-East Italy* (VU University Amsterdam).
- <sup>2</sup> Greco 2009; Vanzetti 2009, 192-193.
- <sup>3</sup> Burgers/Crielaard 2007, 89-90, with fig. 15 for a trench plan.
- <sup>4</sup> Cf. Burgers/Crielaard 2007, 90.
- <sup>5</sup> Cf. Orlandini/Castaldi 1995, 59-60 no 8, with fig. 190.
- <sup>6</sup> Burgers/Crielaard 2007, 90-1, with fig. 20.
- <sup>7</sup> Perhaps this shows that meat of wild animals was consumed (cf. Carter 2004, 386: L'Incoronata). The iron double axe may have been used for hunting or butchering large animals. Note that deer hunting was a prestige-providing activity, judging from representations of deer and deer hunting on Messapian stelae (see section 4 below: Cavallino stele) and Daunian stelae (e.g. Nava 1980, pls. 73, 327-28).
- <sup>8</sup> Stone platforms of somewhat smaller dimensions are found in funerary contexts and have been associated with chthonian cults, although others clearly had a domestic function, see Mazarakis Ainian 1997, 122-123; also Gounaris 2007, 114 (building IZ, Central Quarter Oropos).
- <sup>9</sup> Mazarakis Ainian 1997, 120-121, with figs. 497-498; cf. Lang 1996, 139.
- <sup>10</sup> Mazarakis Ainian 1997, 122. Note that the vertical wall faces of circular structure H at Skala Oropou are coated in clay, Gounaris 2007, 111.
- <sup>11</sup> Mazarakis Ainian 1997, 119-120.
- <sup>12</sup> We started studying the pottery during the 2008 season; our statements about it must therefore be regarded as preliminary.
- <sup>13</sup> 'Spools' were probably weights for tablet weaving narrow strips of textile, possibly patterned; see Gleba 2008, 140ff.
- <sup>14</sup> Unless we are to interpret this, as at L'Incoronata, as a hut floor; see Denti 2010, 356.
- <sup>15</sup> This date is suggested by the absence of bichrome matt-painted sherds. The matt-painted pottery has stylistic links with both the Bradano and the Salento area.
- <sup>16</sup> Otto 2005, 7-9. Gaia cults probably also existed at Satoryion and Taranto (Contr. Pizzone).
- <sup>17</sup> Burgers/Crielaard 2007, 91-92.
- <sup>18</sup> Burgers/Crielaard 2007, 91-92, with figs 24a and 44a.
- <sup>19</sup> Burgers/Crielaard 2007, 92, with figs 25, 39a, b, d, 42b, e, 41d, h, 43b-c, 44g.
- <sup>20</sup> Cf. e.g. Pemberton 1989, 93 no. 80 (krateroid skyphos, decorated with narrow vertical ribs, third quarter 4<sup>th</sup> c.).
- <sup>21</sup> Osanna et al. 2008, 51-62; Battiloro/Bruscella/Osanna 2010, with refs. to earlier literature. For plans and reconstructions, Battiloro/Bruscella/Osanna 2010, 242-3 figs. 4 and 6. The authors assume that both structures carried a superstructure of smaller stone blocks, the 'naiskos' housing the (seated) statues of terracotta, Battiloro/Bruscella/Osanna 2010, 242, 263. The smaller roof block visible in fig. 35 A-B is similar in proportions to our roof block A; the authors contemplate that it either adorned the upper part of the 'altar' (together with a twin block, now lost) or did not belong to this structure at all and might even have belonged to the 'naiskos', Osanna et al. 2008, 56, 61. In our 3D reconstruction below we do not include the hypothesized superstructure.
- <sup>22</sup> LIMC III-2 (1986), 461 no 59.
- <sup>23</sup> *Dokana* and amphorai: LIMC III-2 (1986), 465 no 122, p. 476 no 225b. Dioskouroi and snakes: 476 no 246, 477 no 257. Dioskouroi, *dokana* and snakes: 461 no 58, and LIMC III-1 (1986), p. 586-587 no 224 (= late Archaic marble stelai from Sparta). Dioskouroi, amphorai and snakes: Pirzio Biroli Stefanelli 1977, pls 9, 29, 31, 33, 65; Dioskouroi, amphorai and *dokana*: pls 29, 30, 33, 48. We wish to thank Stefan Kooi for his iconographic observations on the *pinakes*. On *dokana*, see further Guarducci 1984, 141ff.
- <sup>24</sup> Gury 1986 (= LIMC III-1), 589.
- <sup>25</sup> Pirzio Biroli Stefanelli 1977, 310ff., 380; De Juliis 2000, 94-95.
- <sup>26</sup> De Juliis 2000, 94; also Guarducci 1984, 135.
- <sup>27</sup> Pirzio Biroli Stefanelli 1977, 382; De Juliis 2000, 94-96.
- <sup>28</sup> Pirzio Biroli Stefanelli 1977, 382-3: shapes II and III, 'con le caratteristiche anse che si incurvano sormontando la bocca del vaso'.
- <sup>29</sup> See also *Il.* 3. 243; *Od.* 11. 301ff.; Pindar, *Pyth.* 11.61-64; *Nem.* 10.56-57.
- <sup>30</sup> Burgers/Biesiekirska/Laera 2011.
- <sup>31</sup> Ross/Sobotkova/Burgers 2009; S. Ross/A. Sobotkova, internal report 05072008.
- <sup>32</sup> A. Santoriello/A. Rossi, internal report 28012011.
- <sup>33</sup> Waagen 2011.
- <sup>34</sup> D'Andria/Mastronuzzi 2008, 226-229.
- <sup>35</sup> Pancrazzi 1979, 233-235; D'Andria 1979, pl. 23; D'Andria 1983, 45-46, pl. 26, fig. 3; D'Andria 2005; Melissano 2005, 71-72; D'Andria/Mastronuzzi 2008.
- <sup>36</sup> Cocchiario 1999; 2002.
- <sup>37</sup> D'Andria/Mastronuzzi 2008, 228.
- <sup>38</sup> D'Andria/Mastronuzzi 2008, 229.
- <sup>39</sup> Lombardo 1994.
- <sup>40</sup> Cocchiario 2002, 82; D'Andria/Mastronuzzi 2008, 227.
- <sup>41</sup> D'Andria/Mastronuzzi 2008.
- <sup>42</sup> D'Andria/Mastronuzzi 2008, 228-229.
- <sup>43</sup> Early imports from 2003-2005 seasons: Burgers/Crielaard 2007, 102-104. Origin Thapsos class: Coldstream 2008, 461.
- <sup>44</sup> Sub-Geometric fragments have also been found in domestic contexts at L'Amastuola, see Maruggi 1996a, 214-215, figs 17-18; 1996b, 262-266; Burgers/Crielaard 2007, 104, figs 44-45.
- <sup>45</sup> E.g. skyphoi: cf. our fig. 14b and d, with Maruggi 1996b, 255; Orlandini/Castaldi 1995, 156 fig. 207 (right); Hänsel 1973, tav. II; one-handled cups: cf. our fig. 14c, with Orlandini et al. 1986, 132 no 71; krateriskoi: cf. decoration of our fig. 14f. with De Siena 1986, tav. 42-43; hydriai: cf. our fig. 14h-i, with Orlandini et al. 1986, 162 no 116; stamnoi: cf. our fig. 14n-o, with Orlandini/Castaldi 1992, 126-127 figs 188-189; handmade basin: cf. our fig. 14q, with Orlandini/Castaldi 1997, 148 fig. 257. For Siris, see also Giardino 2010.
- <sup>46</sup> Another example of figuratively decorated, Sub-Geometric pottery are two fragments of a dinos found by Maruggi, originally showing two antithetic horses; the vase is probably an import from L'Incoronata or Siris; Maruggi 1996b, 258, 263, 266, nos. 248-249.
- <sup>47</sup> Burgers/Crielaard 2007, 106-107.
- <sup>48</sup> For overviews, see Blondé/Perreault 1992; Seifert 1993;

- Lippolis 1996; Fischer-Hansen 2000. We thank Timothy Frese for sharing with us the results of his work on pottery workshops in the Archaic Greek world.
- <sup>49</sup> As e.g. at Corinth, Metapontion and (presumably) Taras, see Cracolici 2003, 14; Fischer-Hansen 2000, 109.
- <sup>50</sup> E.g. at Kerkyra, see Preka-Alexandri 1992, 43ff.
- <sup>51</sup> Cuomo di Caprio 1979; 1992.
- <sup>52</sup> Burgers/Crielaard 2007, 92.
- <sup>53</sup> Ibid., 92 fig. 23a.
- <sup>54</sup> Papadopoulos 2003, figs 2.2-2.22, 2.60, 2.69, 2.82-2.83, 4.1-4.26, 4.28-4.34.
- <sup>55</sup> Ibid., 8-9.
- <sup>56</sup> Clay rods, referred to as *bastoncelli*, have been found among the 5<sup>th</sup>/4<sup>th</sup>-c. BC potter's debris at Taranto (see Papadopoulos 2003, 18, 265-266). Closer to our test pieces, however, are the rectangular 'plaques' with a circular hole at one end that came to light in large quantities in the pottery workshop at Phari on Thasos (ca 525-450 BC); the only example that has been illustrated has the shape of rectangular bar (ibid., 17, 260-261, with refs.; test piece mentioned is reproduced as fig. 4.27). Although it is not certain that they were connected to the manufacture of roof tiles, it may be noted that the Phari workshop produced not only fine wares, but also coarse wares and Laconian tiles, see Perreault 1999, 296-297.
- <sup>57</sup> Burgers/Crielaard 2007, 92 fig. 23b.
- <sup>58</sup> Cf. the size of one of the kilns and the structures that are part of the 'decantation' complex found at Phari, Thasos (see n. 56 above).
- <sup>59</sup> See e.g. Preka-Alexandri 1992, 43-51 (Kerkyra); Dell'Aglio 1996, 56ff. (Taranto); Papadopoulos 2003 (Athens); Perreault 1999 (Phari, Thasos).
- <sup>60</sup> Mazarakis Ainian 1997, figs 376-381.
- <sup>61</sup> Cf. L'Incoronata 'greca': Carter 2004, 379.
- <sup>62</sup> Burgers/Crielaard 2007, 86-87.
- <sup>63</sup> See also Crielaard/Burgers 2011.
- <sup>64</sup> Stazio 1968, 271.
- <sup>65</sup> Stazio 1968, 270-272; Lippolis 1990, 416; Menchelli 1991, 470-474; Biffino 2001, 188, site no 2.
- <sup>66</sup> Dell'Aglio 2002, 115; Mattioli 2002, 116-118; Andreassi 2003, 761-762.
- <sup>67</sup> Burgers/Crielaard 2007, 111.
- <sup>68</sup> Termito: Giardino 2010, 355-356. There are good reasons to think that Taras and Torre Saturo also fit into this type of settlement. Biological evidence for 'mixed' community at Metapontion, see Carter 2004, 389.
- <sup>69</sup> Burgers/Crielaard 2007, 107-108.
- <sup>70</sup> Morris 1998, 27-28.
- <sup>71</sup> Ebbinghaus 2005. See further Burgers/Crielaard 2011, 133-158.
- <sup>72</sup> E.g. van Dommelen 1998; Malkin 1998, 5-6; 2004, 355-357; Antonaccio 2005, 100.
- <sup>73</sup> See Hall 2004, 42.
- <sup>74</sup> Giangiulio 2010.
- <sup>75</sup> Cf. Giangiulio 2010.
- <sup>76</sup> Hall 2002; 2004, 38-39, 45, 50; Crielaard 2009.
- klea Lucana? Il santuario extra-urbano di Masseria Petrulla nella Valle del Sinni (Polocoro – MT), *Kernos* 23, 239-270.
- Biffino, A. 2001, Appendice archeologica, in V.A. Greco et al. (eds), *I 4000 anni di Accetta fra monaci, massari e galan-uomini*, Tarantum, 185-195.
- Blondé, F./J.Y. Perreault 1992, *Les ateliers de potiers dans le monde grec aux époques géométrique, archaïque et classique* (BCH Suppl. 23), Paris.
- Burgers, G.-J./J.P. Crielaard 2007, Greek Colonists and Indigenous Populations at L'Amastuola, southern Italy, *BABesch* 82, 77-114.
- Burgers, G.-J./J.P. Crielaard 2008, Paesaggi del contatto. Indigeni e greci nelle Murge Tarantine, in M. Bettelli/C. De Faveri/M. Osanna (eds), *Prima delle colonie: organizzazione territoriale e produzioni ceramiche specializzate in Basilicata e in Calabria settentrionale ionica nella prima età del Ferro*, Venosa, 337-353.
- Burgers, G.-J. /D.J. Biesiekirska/F. Laera 2011, Le ricognizioni a tappeto nel territorio, in Burgers/Crielaard 2011, 119-131.
- Burgers, G.-J./J.P. Crielaard 2011, *Greci e indigeni a L'Amastuola*, Massafra.
- Burgers, G.-J./J.P. Crielaard in press, Mobilità, migrazioni e fondazioni nel tarantino nordorientale e il caso studio de L'Amastuola, in *Atti del I Convegno di Studi sulla Magna Grecia, Taranto 5-8 Ottobre 2010*, Tarantum.
- Carter, J.C. 2004, The Greek Identity at Metaponto, in K. Lomas (ed.), *Greek Identity in the Western Mediterranean. Papers in Honour of Brian Shefton* (Mnemosyne Suppl. 246), Leiden, 363-390.
- Cocchiaro, A. 1999, Mesagne (Brindisi), via Castello, *Taras* 19-1, 70-71.
- Cocchiaro, A. 2002, Mesagne (Brindisi), via Castello 20, *Taras* 22-1, 81-82.
- Coldstream, J.N. 2008, *Greek Geometric Pottery. A Survey of Ten Local Styles and Their Chronology*, Exeter.
- Cracolici, V. 2003, *I sostegni di fornace del kerameikos di Metaponto* (Beni Archeologici - Conoscenza Technologie Quaderno 3), Bari.
- Crielaard, J.P. 2009, The Ionians in the Archaic Period: Shifting Identities in a Changing World, in A.M.J. Derks/N.G.A.M. Roymans (eds), *Ethnic Constructs in Antiquity: the Role of Power and Tradition*, Amsterdam, 37-84.
- Crielaard, J.P./G.-J. Burgers 2011, Communicating Identity in an Italic-Greek Community: the Case of L'Amastuola (Salento), in M. Gleba/H.W. Horsnaes (eds), *Communicating Identity in Italic Iron Age Communities*, Oxford, 73-89.
- Cuomo di Caprio, N. 1979, Pottery- and Tile-Kilns in South Italy and Sicily, in A. McWhirr (ed.), *Roman Brick and Tile Studies in Manufacture, Distribution and Use in the Western Empire*, Oxford, 73-95.
- Cuomo di Caprio, N. 1992, Les ateliers de potiers en Grande Grèce: quelques aspects techniques, in Blondé/Perreault 1992, 69-85.
- D'Andria, F. 1979, Salento arcaico: la nuova documentazione archeologica, in *Salento arcaico. Atti del Colloquio Internazionale, Lecce 5-8 aprile 1979*, Galatina, 15-28.
- D'Andria, F. 1983, Nuovi dati sulla relazione tra Daunia e Messapia, in *Studi in onore di Dinu Adamesteanu*, Galatina, 41-47.
- D'Andria, F. 2005, Le trasformazioni dell'insediamento, in F. D'Andria (ed.), *Cavallino: pietre, case e città della Messapia arcaica*, Ceglie Messapico, 34-43.
- D'Andria, F./G. Mastronuzzi 2008, Cippi e stele nei santuari magno-greci, in G. Greco/B. Ferrara (eds), *Doni*

## BIBLIOGRAPHY

- Andreassi, G. 2003, L'Attività archeologica in Puglia nel 2002, in *Ambiente e paesaggio nelle Magna Grecia. Atti del XLII Convegno di Studi sulla Magna Grecia, Taranto 5-8 Ottobre 2002*, Tarantum, 741-770.
- Antonaccio, C. 2005, Excavating Colonization, in H. Hurst/S. Owen (eds), *Ancient Colonizations: Analogy, Similarity and Difference*, London, 97-113.
- Battiloro, I./A. Bruscella/M. Osanna 2010, Ninfe ad Hera-



- agli dei. Il sistema dei doni votivi nei santuari. Atti del Seminario di Studi, Napoli, 21 aprile 2006, Naples, 223-240.
- De Juliis, E.M. 2000, *Taranto*, Bari.
- Dell'Aglio, A. 1996, Taranto, in Lippolis 1996, 51-67.
- Dell'Aglio, A. 2002, La prosocchoros tarentina, in *Taranto e il Mediterraneo. XLI Convegno di Studi sulla Magna Grecia, Taranto 12-16 Ottobre 2001*, Nuovi documenti dai territori tarantini (dalla Tavola rotonda di Taranto, 7 giugno 2001), Tarantum, 19-42.
- Denti, M. 2010, Nouvelles perspectives à l'Incoronata. Une zone artisanale gréco-indigène du VIIe et les phases cénôtres du VIIIe siècle av. J.-C., *MEFRA* 122, 350-360.
- De Siena, A. 1986, Metaponto. Nuove scoperte in proprietà Andrisani, in *Siris-Polieion. Fonti letterarie e nuova documentazione archeologica (Incontro Studi – Policoro 1984)*, Galatina, 135-156.
- Ebbinghaus, S. 2005, Protector of the City, or the Art of Storage in Early Greece, *JHS* 125, 51-72.
- Fischer-Hansen, T. 2000, Ergasteria in the western Greek world, in P. Flensted-Jensen et al. (eds), *Polis & Politics. Studies in Ancient History Presented to M.H. Hansen on his Sixtieth Birthday, August 20, 2000*, Copenhagen, 91-120.
- Giangiulio, M. 2010, Deconstructing Ethnicities. Multiple Identities in Archaic and Classical Sicily, *BABESCH* 85, 13-23.
- Giardino, L. 2010, Forme abitative indigene alla periferia delle colonie greche. Il caso di Policoro, in H. Tréziny (ed.), *Greco et indigènes de la Catalogne à la Mer Noire. Actes des rencontres du programme européen Ramses (2006-2008)*, Paris, 349-370.
- Gleba, M. 2008, *Textile Production in Pre-Roman Italy*, Oxford.
- Gounaris, A.P. 2007, Curvilinear versus Rectilinear?, in Mazarakis Ainian 2007, 77-123.
- Greco, E. 2009, Le esperienze coloniali greche: modelli e revisioni: introduzione ai lavori, in M. Lombardo/F. Frisone (eds), *Colonie di colonie: le fondazioni sub-coloniali greche tra colonizzazione e colonialismo. Atti del Convegno, Lecce 22-24 giugno 2006*, Galatina, 9-16.
- Guarducci, M. 1984, Le insegne dei Dioscuri, *ACI* 36, 133-154.
- Gury, F. 1986, Dioskouroi, *LIMC* III-1, Zurich, Munich, 567-635.
- Hänsel, B. 1973, Policoro (Matera). Scavi eseguiti nell'area dell'acropoli di Erelea negli anni 1965-1967, *NSc* 27, 400-492.
- Hall, J. 2002, *Hellenicity. Between Ethnicity and Culture*, Chicago.
- Hall, J.M. 2004, How 'Greek' were the Early Western Greeks? in K. Lomas (ed.), *Greek Identity in the Western Mediterranean. Papers in Honour of Brian Shefton (Mnemosyne Suppl. 246)*, Leiden, 34-54.
- Lang, F. 1996, *Archaische Siedlungen in Griechenland. Struktur und Entwicklung*, Berlin.
- Lippolis, E. 1990, L'Amastuola (o La Mastuola), in G. Nenci/G. Vallet (eds), *Bibliografia topografica della colonizzazione greca in Italia e nelle isole tirreniche VIII*, Pisa/Rome, 414-416.
- Lippolis, E. (ed.) 1996, *I Greci in occidente. Arte e artigianato in Magna Grecia (Taranto, ex Convento di San Domenico, dal 29 giugno 1996)*, Naples.
- Lombardo, M. 1994, Tombe, necropoli e riti funerari in 'Messapia': evidenze e problemi, *Studi di Antichità* 7, 25-45.
- Malkin, I. 1998, *The Returns of Odysseus. Colonization and Ethnicity*, Berkeley etc.
- Malkin, I. 2004, Postcolonial Concepts and Ancient Greek Colonization, *Modern Language Quarterly* 65, 341-364.
- Maruggi, G.A. 1996a, Crispiano (Taranto), L'Amastuola, in F. D'Andria/K. Mannino (eds), *Ricerche sulla casa in Magna Grecia e in Sicilia. Atti del colloquio, Lecce, 23-24 giugno 1992*, Galatina, 197-218.
- Maruggi, G.A. 1996b, Le produzioni ceramiche arcaiche, in Lippolis 1996, 247-267.
- Mattioli, B. 2002, 1. Località Capitolicchio Vecchia – Gravinola Nuova – Masseria Carducci, in *Notiziario delle Attività di Tutela, Gennaio-Dicembre 2001*. *Taras* 22, 1-2, 116-118.
- Mazarakis Ainian, A. 1997, *From Ruler's Dwellings to Temples. Architecture, Religion and Society in Early Iron Age Greece (1100-700 B.C.)* (SIMA 121), Jonsered.
- Mazarakis Ainian, A. (ed.) 2007, *Oropos and Euboea in the Early Iron Age. Acts of an International Round Table, University of Thessaly, 2004*, Volos.
- Melissano, V. 2005, Cavallino e la Messapia nel quadro dell'archeologia del genere, in F. D'Andria (ed.), *Cavallino: pietre, case e città della Messapia arcaica*, Ceglie Messapica, 71-75.
- Menchelli, S. 1991, Masseria Leucaspide (comune di Taranto), in G. Nenci/G. Vallet (eds) *Bibliografia topografica della colonizzazione greca in Italia e nelle isole tirreniche IX*, Pisa/Rome, 470-474.
- Morris, I. 1998, Archaeology and Archaic Greek History, in N. Fischer/H. van Wees (eds), *Archaic Greece: New Approaches and New Evidence*, London, 1-91.
- Nava, M.L. 1980, *Stele daunie*, Florence.
- Orlandini, P. et al. 1986, *I Greci sul Basento. Mostra degli scavi archeologici all'Incoronata di Metaponto 1971-1984*, Milano, 1986, Como.
- Orlandini, P./M. Castoldi (eds) 1992, *Ricerche archeologiche all'Incoronata di Metaponto 2. Dal villaggio indigeno all'emporio greco. Le strutture e i materiali del saggio T*, Milan.
- Orlandini, P./M. Castoldi (eds) 1995, *Ricerche archeologiche all'Incoronata di Metaponto 3. L'oikos greco del trench S. Lo scavo e i reperti*, Milan.
- Orlandini, P./M. Castoldi (eds) 1997, *Ricerche archeologiche all'Incoronata di Metaponto 5. L'oikos greco del saggio H. Lo scavo e i reperti*, Milan.
- Osanna, M. et al. 2008, *Culti greci in Occidente II. Eraclea, Taranto*.
- Otto, B. 2005, Il santuario sorgivo di Siris-Herakleia nell'odierno Comune di Policoro, in M.L. Nava/M. Osanna (eds), *Lo spazio del rito. Santuari e culti in Italia meridionale tra indigeni e greci. Atti delle giornate di studio, Matera, 28 e 29 giugno 2002*, Santo Spirito (BA), 5-18.
- Pancrazzi, O. (ed.) 1979, *Cavallino I. Scavi e ricerche 1964-1967*, Galatina.
- Papadopoulos, J.K. 2003, *Ceramicus Redivivus. The Early Iron Age Potters' Field in the Area of the Classical Athenian Agora (Hesperia Suppl. 23)*, Princeton.
- Pemberton, E.G. 1989, *Corinth XVIII, pt. 1: The Sanctuary of Demeter and Kore. The Greek pottery*, Princeton.
- Perreault, J.Y. 1999, Production et distribution à l'époque archaïque: le cas d'un atelier de potier de Thasos, in J.P. Crielaard et al. (eds), *The Complex Past of Pottery. Production, Circulation and Consumption of Mycenaean and Greek Pottery (Sixteenth to Early Fifth Centuries BC). Proceedings of the ARCHON International Conference, Amsterdam 1996*, Amsterdam, 291-301.
- Pirzio Biroli Stefanelli, L. 1977, Tabelle fittili tarantine relative al culto dei Dioscuri, *ACI* 29, 310-398.
- Preka-Alexandri, K. 1992, A ceramic workshop in Figareto, Corfu, in Blondé/Perreault 1992, 41-52.
- Ross, S./A. Sobotkova/G.-J. Burgers 2009, Remote Sensing and Archaeological Prospection in Apulia, Italy, *JFA* 34, 423-437.
- Seifert, M. 1993, Pottery Kilns in Mainland Greece and on

- the Aegean Islands, *RdA* 17, 95-107.
- Stazio, A. 1968, La documentazione archeologica in Puglia, in *La Città e il suo Territorio. Atti del VII Convegno di Studi sulla Magna Grecia, Taranto 8-12 Ottobre 1967*, Taranto, 265-286.
- Van Dommelen, P. 1998, *On Colonial Grounds. A Comparative Study of Colonialism and Rural Settlement in First Millennium BC West Central Sardinia*, Leiden.
- Vanzetti, A. 2009, Notazione sulla fine dell'età del Ferro precoloniale nella Piana di Sibari, in M. Bettelli/C. De Faveri/M. Osanna (eds), *Prima delle colonie: organizzazione territoriale e produzioni ceramiche specializzate in Basilicata e in Calabria settentrionale ionica nella prima età del Ferro*, Venosa, 179-202.
- Waagen, J. 2011, La necropoli arcaica de L'Amastuola, in G.J. Burgers./J.P. Crielaard 2011, 105-114.
- Yntema, D.W. 2000, Mental Landscapes of Colonization: the Ancient Written Sources and the Archaeology of Early Colonial-Greek South-eastern Italy, *BABesch* 75, 1-49.

ARCHAEOLOGICAL CENTRE, VU UNIVERSITY  
AMSTERDAM  
DE BOELELAAN 1105  
NL-1081 HV AMSTERDAM  
jp.crielaard@let.vu.nl

ROYAL NETHERLANDS INSTITUTE IN ROME  
VIA OMERO 10/12  
I-00197 ROMA  
archeo@knir.it

# Rural Malta: First Results of the Joint Belgo-Maltese Survey Project

Roald F. Docter, Nicholas C. Vella, Nathaniel Cutajar, Anthony Bonanno,  
Anthony Pace

*with contributions by Maxine Anastasi, Babette Bechtold, Morgan De Dapper, Alain De Wulf, Guy Dierkens, Soumaya Garsallah, Rudi Goossens, Boutheina Maraoui Telmini, Jihène Nacef, Timothy Nuttens, Xavier Ruiz i Cano, Mevrick Spiteri, Cornelis Stal, Winfred van de Put, Clive Vella, Lieven Verdonck, John Wood, Renata Zerafa*

## Abstract

*The paper presents the first interdisciplinary results of a joint survey project in the north-west of Malta, with finds ranging from the Prehistoric till the Early Modern period. Three permanently inhabited sites were encountered dating to at least the late 6<sup>th</sup> or early 5<sup>th</sup> century BCE, with a clearer attestation in the Hellenistic/Roman and Late Antique periods. The resulting reconstructed settlement pattern of the Phoenician/Punic period suggests a managed landscape that seems to be a good reflexion of what is happening in North Africa and elsewhere in the central and western Mediterranean. At least from the Roman period on, these sites seem to have specialised on the production of olive oil.*

## INTRODUCTION

This paper presents the initial results of the Malta Survey Project.<sup>1</sup> It sets out the aims of the research, the design of the fieldwork, and the provisional results obtained during the first three campaigns (2008-2010). The Malta Survey Project (henceforth, MSP) is a trilateral endeavour of the Department of Archaeology of Ghent University (Belgium), the University of Malta and the Superintendence of Cultural Heritage (Malta). The scope of the MSP is very clear: it is an intensive, systematic field-walking survey in a kilometre-wide transect in the northwest of Malta, beyond the main Phoenician and Punic urban centre on the island, the present-day Rabat/Mdina (*fig. 1*).<sup>2</sup> The insular landscape is investigated diachronically, even though the MSP's principal interest lies in the Phoenician and Punic periods, that is to say from the late 8<sup>th</sup> century BCE until at least the period of the Roman occupation of the island, which started in 218 BCE. The particularity of the Maltese situation, as compared to other Phoenician/Punic landscapes in the central and western Mediterranean, is the fact that the main urban centre is not situated on the coast, but is located in the island's interior.<sup>3</sup> This may have had an effect upon the way the rural landscape was seen, managed and exploited.

The project was conceived after a meeting that was held in Lisbon in 2005 as part of the 6<sup>th</sup>

International Congress of Phoenician and Punic Studies. One of the present authors (NCV) took part in a session where he spoke about the lack of data related to Punic rural sites on the Maltese archipelago.<sup>4</sup> Phoenician and Punic Malta is largely, if not exclusively, known through the considerable number of tombs scattered all over the island;<sup>5</sup> a lot is available about the distribution of Roman villas on the islands,<sup>6</sup> but we hardly know anything about rural sites of the pre-Roman period.<sup>7</sup> In fact, besides an unpublished intensive survey executed on the island of Gozo by an Anglo-Maltese team between 1988 and 1994, and a pilot survey project by a team of the University of Malta in the Xemxija area to the north of Malta in autumn of 2001 (NCV),<sup>8</sup> the rural landscape of the Maltese islands has never received any systematic attention. In Lisbon, attention was drawn to this lacuna and its ramifications were considered, and in the aftermath a discussion about the subject was held with Roald Docter of Ghent University, who had just been awarded financial support from the Belgian Fund for Scientific Research Flanders in order to investigate the rural landscape of Punic Carthage. Unfortunately, that project got stuck in the Tunisian administrative system and fell through, with the result that in 2008 part of the funds earmarked for the Carthage project could be directed to Malta. The idea of a joint field-walking survey was brought up, a project that could be supported by sufficient funds and



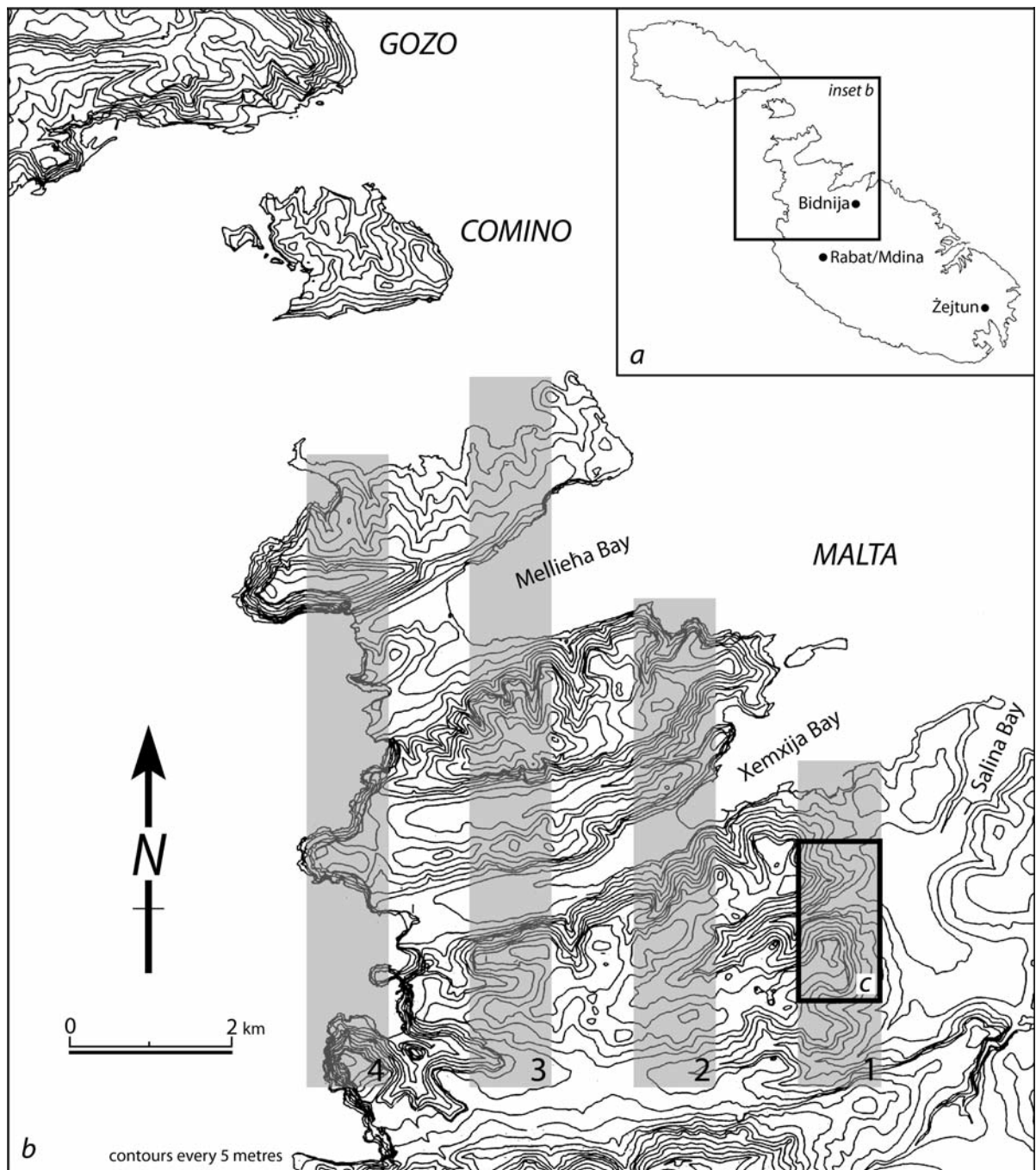


Fig. 1. Map of the Maltese islands with indication of the place names mentioned in the text (a), with inset of the location of the four transects (b), and inset showing the area surveyed in transect 1 (c), corresponding to figs 5-14 (map: MSP, drawn by MA).

backed by an international multi-disciplinary team of specialists. Preparatory work was conducted in Malta with the rest of the team from the Superintendence of Cultural Heritage (AP, NC)

and the University of Malta (AB), and a collaborative agreement covering the period 2008-2012 was drawn up and signed.

RFD, NCV, NC, AB, AP

## AIMS

The Malta Survey Project was designed to accomplish three aims:

1. understand the exploitation of an island landscape over the long-term, using different techniques, starting with a geomorphological study, a systematic field-walking survey, geophysical prospection, and excavation if the opportunity arises, with an overall emphasis on the Phoenician/Punic period;
2. create a reference collection of diagnostic sherds and fabrics, which are period-specific in order to facilitate the identification of abraded sherds picked up during the survey;
3. provide undergraduate and graduate students with training in field-walking methods and techniques as well as finds processing, and encourage the sort of interaction between students and specialists that often results in interesting observations and original insights.

RFD, NCV, NC, AB, AP

## FIELDWORK DESIGN

The designated area for survey was decided upon after serious deliberation. Initially we had in mind a survey in two areas of the Maltese Islands, one in the South (around Żejtun where the University of Malta had an on-going project at a Roman villa site) and one in the North (beyond Mdina/Rabat) (fig. 1). After discussions during a field visit in June 2008 with the geomorphologist, Morgan De Dapper of Ghent University, it was decided that the northern part of Malta would offer us the opportunity of running a series of transects across

different topographic features - including valley slopes, basin, ridge, coastal zone - which characterise the area to the north of the Great Fault (Victoria Lines; figs 1-2).<sup>9</sup> It had the further advantage that it appeared to be a relatively undisturbed 'agro-landscape'.<sup>10</sup> Moreover, in the belief that any study about the mutability of the Maltese landscape is better informed by documentary sources,<sup>11</sup> we wanted to concentrate our efforts in an area for which archival material (consisting essentially of property books - *cabrei* - and related papers) was known to be readily available. Of the four, kilometre-wide transects drawn randomly on a map, we decided to opt for the first one, running northwards from the Victoria Lines, crossing the village of Bidnija. Here the terrain appeared to be accessible to field-walking, with no high walls blocking access to fields. Moreover, the Mdina Cathedral had one of its largest territorial possessions - the territory of Ghajn Riħana - in this area, as readily attested by the 1783 territorial marker built into one of the farmhouses at Bidnija.<sup>12</sup>

The survey took place in the area of Bidnija, 5 km to the north of Rabat/Mdina (fig. 1), each year during the end of August and the beginning of September, when some fields had just been ploughed or others were still fallow after the spring harvest (figs. 2, 8). The field-walking method is quite straightforward and follows tried and tested recovery practices applied elsewhere in the Mediterranean over the last decades.<sup>13</sup> In fact, the survey set-up had initially been conceived on the basis of the Ghent-based Potenza Survey Valley Project (Italy), but was adapted to the landscape realities of Malta.<sup>14</sup> Instead of setting up a grid to

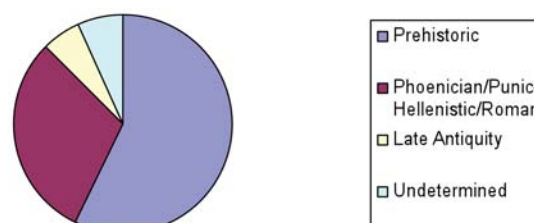


Fig. 2. Typical landscape from the Victoria Lines to the north. In the background at the left is the village and church of Bidnija, in the centre the modern town of Bugibba/Qawra with Salina Bay to the right (photograph: MSP, by RFD, 28.8.2009).

demarcate tracts as is sometimes done in surveys, walking in Malta could be carried out within plots of land defined by field boundary walls or terrace walls; these constituted the tracts or collection units. Surface visibility was overall very good but overgrowth in abandoned fields and below ridge escarpments made field-walking difficult and sometimes impeded visibility (*fig. 7*). Two teams of walkers were assigned two separate areas during each campaign, and walker spacing was standardized to 10 metres, a distance which is considered a safe option where inexperienced field-walkers are involved. We collected only what one could see while walking along the line without making any selection of finds in the field. This translates into an area of about a metre to either side. In this manner, an area of 20% within each tract (and within the transect) was sampled and all archaeological material - consisting mostly of pottery sherds but also worked stone, tile, marble, plaster, glass, bone, pebbles and sea shells - was retrieved. Given the limited sizes of most tracts, concentrations of finds could not always be collected separately; in most of these cases the tract as a whole may be considered as a concentration. In those cases where in the field or after finds processing the existence of a site was suspected, additional intensive survey took place in the form of a 'block survey' in grids of 10 x 10 metres. In each grid, two persons collected all the pottery and other artefacts they could in five minutes. These sites were also geophysically investigated with a Ground Penetrating Radar (LV). Data collection was noted in tract record forms, adapted from tried and tested versions, designed to integrate topographic, geological and field-use information with other data related to structural features that may be present within tracts, either natural ones (e.g. caves), built (e.g. apiary huts, bird trapping hides, farmhouses, corbelled huts, threshing floors) or even rock-cut (e.g. tombs, cart-ruts).

Given the size of the island of Malta (ca 245 square kilometres), the total surface that will be covered by the survey at the end of the project amounting to ca 5 square kilometres, though small in itself, gives a fairly representative coverage of 2% of the island. The project was designed to be very intensive and backed by a very detailed study of the finds. The philosophy behind the survey may, hence, be summarised as 'small is beautiful' but the results may be considered to be fairly representative of the archaeology of the Maltese landscape.

RFD, NCV, NC, AB, AP, MDD, MA, MS, LV



*Fig. 3. Chronological division of the archaeological sites recorded from north-west Malta (N=388; diagram prepared by MS).*

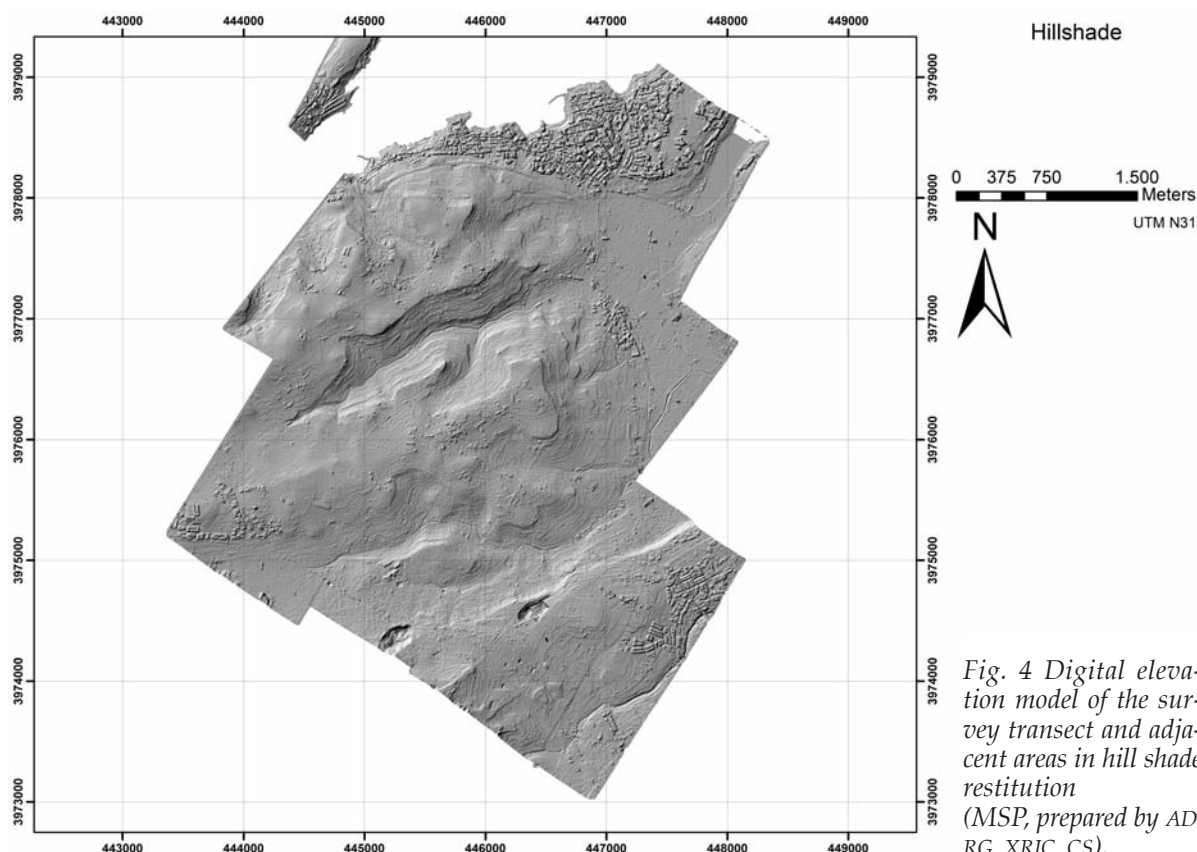
#### INVENTORY OF ARCHAEOLOGICAL SITES IN NORTH-WEST MALTA

In 2008, initial studies as part of the Malta Survey Project involved the compilation of an inventory of archaeological sites found in the north-west of Malta. Such a compilation of known archaeological data aims at placing the results attained during the field walking survey in a broader archaeological context. A total of 308 data sheets including Prehistoric, Phoenician/Punic, Hellenistic/Roman and Late Antique archaeological sites were inventoried. A division of these data by period shows that 222 sites belong to Prehistoric times, 117 sites belong to the Phoenician/Punic and Hellenistic/Roman times and 23 sites belong to Late Antiquity. A total of 26 archaeological sites are yet not determined to any period (*fig. 3*).

This desktop study involved an in-depth research where all the known data reported in various bibliographical sources since at least the 1860s were captured onto data sheets designed for the project's inventory. The bibliography includes primary sources reporting archaeological discoveries and observations as well as interventions carried out. These sources include the Museum Annual Reports (M.A.R.), the Archaeological Field Notes of T. Zammit and also other descriptive writings by G.A. Ciantar (1772), J.S. Swann (1866) and A. Mayr (1905). Other detailed studies, such as the preliminary archaeological reports of the Missione Archeologica Italiana (1963-1970) on the San Pawl Milqi villa site as well as the survey of prehistoric antiquities by J.D. Evans (1971), the survey of catacombs by M. Buhagiar (1986), and the survey of Punic antiquities by C. Sagona (2002), were all central to the compilation of this inventory.

The data compiled for this inventory were recorded on Data Capture Sheets. Each data sheet relates to a single archaeological site, which may consist of various archaeological remains, and includes details about its location, the history of





*Fig. 4 Digital elevation model of the survey transect and adjacent areas in hill shade restitution (MSP, prepared by AD, RG, XRIC, CS).*

archaeological interventions, a description and date, the landscape setting, and bibliographic sources.

The information gathered during this initial phase of the project will be integrated with the results attained from field walking and mapped onto GIS for further studies. Moreover, this inventory of archaeological sites will contribute to the populating of the National Cultural Heritage Inventory Management System (CHIMS).

MS

#### TOPOGRAPHICAL SURVEY AND DIGITAL ELEVATION MODEL<sup>15</sup>

In 2008, a small team of topographers (AD, TN) joined the survey to measure the several features encountered during the field walking process. They were aided in the field by a Maltese archaeology student (RZ). It was decided to focus upon the area of the garigue plateau of the Ġebel Ghawżara site and adjacent areas, because it would constitute the single largest more or less undisturbed and accessible garigue plateau within the 5km<sup>2</sup> territory covered by the survey.<sup>16</sup> The topo-

graphical measurements were taken with a total station (Trimble S6 Robotic Total Station) and GPS (GNSS) measurements. The accuracy of the angle measurement of the Trimble S6 used for this project is up to 2" and the accuracy of the distance measurement in standard mode is about 3 mm + 2 ppm or in tracking mode about 10 mm + 2 ppm. Features recorded include tombs, edges of quarries, walls and cart-ruts.

Between 2008 and 2010, several Phoenician/Punic, Hellenistic, Roman, Late Antique and Medieval sites and features have been documented within the survey area. In order to facilitate the spatial analysis of these, it was deemed essential to have an orthophoto plan and a digital elevation model (DEM), covering the full survey area and its adjacent landscape. The use of such geo-data has been advantageous in other recent archaeological projects of Ghent University.<sup>17</sup> Therefore, an orthophoto plan and DEM with an accuracy of 25 cm of an area of ca 20 km<sup>2</sup> in the north-western part of Malta has been constructed by the Geomatics Department of Ghent University.

Since no data with the desired quality (better than 5 meters) had been available for this area,

the orthophoto plan and DEM had to be computed based on a set of 69 reference points in the field, needed for geo-referencing. With a resolution of 25 cm, an accuracy criterion of 0.5 to 2 pixels, or 12.5 cm to 50 cm, should be taken into account for each measured reference point.<sup>18</sup> The 69 points were measured in a one-week field campaign in November 2009 by a small team (ADW, RG, RFD, XRIC) employing a global navigation system (GNSS) using differential correction signals of the StarFire augmentation system. Using the C-NAV 2050 GPS module and 5 minutes of initialization, the accuracy criterion could be respected.<sup>19</sup>

The final joined DEM for the whole area (fig. 4) is based on nine photogrammetric stereo couples, with a scale of 1:10,000 and a resolution of 25 cm.<sup>20</sup> These stereo couples were processed using the photogrammetric software *VirtuoZo*<sup>TM</sup>.<sup>21</sup> The quality analysis of the DEM, based on overlapping zones between different orthophotos, is executed by the point processing software *WinTopo*. Based on this analysis, an altimetric error of 1 metre is calculated within the 50% 'circular error probable' (CEP) and an error of 2 meters within the 76.2% CEP. The arithmetic mean error of the altimetry is 28 cm. Different derivative products from the orthophoto plan and DEM - like contour line maps, 3D models, hill-shade maps and others - will serve to analyse further the sites and archaeological features in this part of Malta.

AD, RG, XRIC, TN, CS, RZ

#### FINDS AND REGISTRATION

The field survey carried out in 2008, 2009 and 2010 yielded 40,696 finds, consisting mainly of pottery fragments. This is a remarkably high number considering the fact that actual survey on the terrain lasted only 33 working days with two teams of between 8 and 10 persons each. Moreover, such high numbers were not expected given the fact that initial interviews with Maltese farmers gave the impression that pot sherds had often been collected from the fields on a regular basis to be used in the production of *deffun* - a thin waterproof mortar consisting of crushed potsherds mixed with lime applied to flat roofs, a practice that has also been documented in a note published early last century; apparently there was a marked preference for prehistoric potsherds for such a task.<sup>22</sup> It should be stated here, that during the survey no preliminary selection was made in the field. All finds picked up during the field walking were brought to the finds' laboratory, where they were washed, counted, bagged and registered in a pre-

liminary manner by the field walking teams.

The collected and counted finds were already during the survey campaigns subject to detailed inventorying operations in the finds' laboratory by several ceramics specialists (WvdP, MA, RFD, BMT, JN, SG, NC). Every individual pottery fragment was clipped in order to get a fresh break for detailed fabric study with the aid of magnifying glasses (8 or 10x). Apart from their own expertise on which each individual specialist could rely, a reference collection of the most common fabrics encountered during the survey was created for comparative purposes. By this procedure, a first basic classification could be made of all finds, both of the diagnostic and the 'undiagnostic' finds such as wall fragments. Great effort was taken to distinguish different fabrics within the large body of ceramic finds, especially of the local productions.<sup>23</sup> The study of the largely Punic necropolis material by Sagona had established a fabric typology, but in this case the scholar had to operate under the constraints of a museum collection consisting mostly of near-complete or intact vessels.<sup>24</sup> Her fabric typology, therefore, was not based on the study of fresh breaks, but on observations made of the surface of the fabric. The results have a rather limited value and in fact were often difficult to corroborate with the survey material discussed here.

Each find was registered in the database, initially on an EXCEL spread-sheet, with detailed information on the following parameters: survey tract number, pass, feature, wall or concentration number, individual number (if assigned for further study), condition (good, medium, poor), object shape, status (wall, base, rim, handle, etc.), ware (plain, red slip, glazed, etc.), type (if already known), type of non-ceramic find (if applicable: iron, glass, bone, shell, etc.), general date, number of fragments, provenance (local, import or as specific as possible: North Africa, Campania, etc.), additional comments, and the initials of the specialist who made the description. In order to cope with the inevitable backlog ensuing from the detailed study and registration of all the finds, several separate study campaigns were organised. The result is that at present 29,309 finds have been entered in the finds database (i.e. 72%). In Spring 2012 a study campaign is expected to cope with the remaining backlog from the last campaign.

RFD, NCV, NC, MA, BB, GD, SG, BMT, JN, WvdP

## CHRONOLOGY

The fact that the survey is investigating human interaction with the landscape diachronically implies the recovery of material remains encompassing an extremely wide chronological range. We started off our work making use of existing chronologies but we decided to fine-tune these as work progressed for several reasons. For instance, in her study of (Phoenician/)Punic antiquities, Sagona established a general, but refined chronological framework for the Phoenician/Punic period, based upon the pottery encountered in the Maltese tomb groups.<sup>25</sup> In view of the fact that the extremely fragmented and often very abraded pottery found in the survey may only rarely be compared to the pottery types defined by Sagona, and hence to her phases, it was decided not to use her chronology for the Iron Age, but to work out the following general dating scheme for the survey. In the case of the Phoenician/Punic and Hellenistic periods, we refer to the dating scheme worked out for Carthage in the column 'Definition' of the table below.<sup>26</sup>

A very pertinent question relates to the apparent overlap between two chronologies: that of the 'Late Punic' period in use for the material culture of Carthage and the rest of the Central Mediterranean and of the 'Roman' or 'Roman Republican'

period used for Malta. After the Romans captured the Carthaginian garrison that guarded Malta in 218 BCE at the start of the Second Punic War and effectively took possession of the Maltese islands, these soon became included in the administration of the Roman province of Sicily. The material culture of Malta and its population, however, may initially at least not have differed much from that of the Late Punic world to which it culturally was still connected. This seems to hold especially for the first half of the 2<sup>nd</sup> century BCE, during which the Maltese islands would have been open to influences from both the prosperous metropolis of Carthage and its North African territories and the West Sicilian territory, where the population had retained most of its Punic character under Roman administrative domination.<sup>27</sup> Since also for Carthage, this period is often referred to as the 'Hellenistic phase', we have chosen to use this more neutral term for this period.

Also with regard to the periods 'Late Antiquity' and 'Early Medieval' the realities of the archaeological record have been the defining factor rather than the historical data. Historically, one would otherwise have considered the passage of Belisarius in Malta in 533 CE as the start of the Byzantine period, and equally the year 870 CE (conquest of Malta) as the start of the Arab period.<sup>28</sup>

RFD, NCV, NC, AB, AP, MA, BB

Period	Absolute chronology	Definition	Sagona 2002, 2008
Prehistoric	Till mid-8 <sup>th</sup> century BCE	Prehistoric/Bronze Age	Archaic Phase I (ca 1000-750 BCE)
Phoenician/Punic	Mid-8 <sup>th</sup> -3 <sup>rd</sup> century BCE	Phoenician/Early Punic-Late Punic I	Established Phase I (750-620 BCE)
			Late Phase I to Early Phase II (620-600 BCE)
			Phase II (600-500 BCE)
			(Early) Phase III (500-410 BCE)
			Late Phase III to Early Phase IV (410-218 BCE) <sup>29</sup>
Hellenistic	2 <sup>nd</sup> -1 <sup>st</sup> century BCE	Late Punic II-Early Roman	Phase IV (218-100 BCE)
Roman	1 <sup>st</sup> -3 <sup>rd</sup> century CE	Roman Imperial	Phase V (100 BCE-ca 50 CE)
			Phase VI (ca 50 CE onwards)
Late Antiquity	4 <sup>th</sup> -7 <sup>th</sup> century CE	Late Roman-Early Byzantine	
Early Medieval	8 <sup>th</sup> -early 10 <sup>th</sup> century CE	Late Byzantine-Early Arab	
High Medieval	Late 10 <sup>th</sup> -early 13 <sup>th</sup> century CE	Late Arab-Norman	
Late Medieval	Late 13 <sup>th</sup> -early 16 <sup>th</sup> century CE	Aragonese-Renaissance	
Early Modern	Late 16 <sup>th</sup> -20 <sup>th</sup> century CE	Knights-British Colonial	
Recent	20 <sup>th</sup> century CE		



## FINDS DENSITIES AND DISTRIBUTION

As the Malta Survey Project is still on-going, fig. 5 shows the status of field-walking and finds processing at the end of the 2010 campaign. Field-walking occurs systematically: the transect is covered as completely as possible in its entire width (1 km) in passes of 10 m distance, except for tracts which are not accessible for field-walking because of excessive overgrowth or because access is not

allowed by the owner (tracts shown in red). For the tracts marked in yellow, field-walking took place but finds have not, or only partially, been processed so far. For those tracts marked in green, detailed results from finds processing are available, and some of these are presented in figs 9-14.

The overall finds density map (fig. 6) includes all types of objects: pottery, ceramic and non-ceramic building material, drainage pipes, lithic artefacts, pebbles, bones, glass, metal objects, fossils,

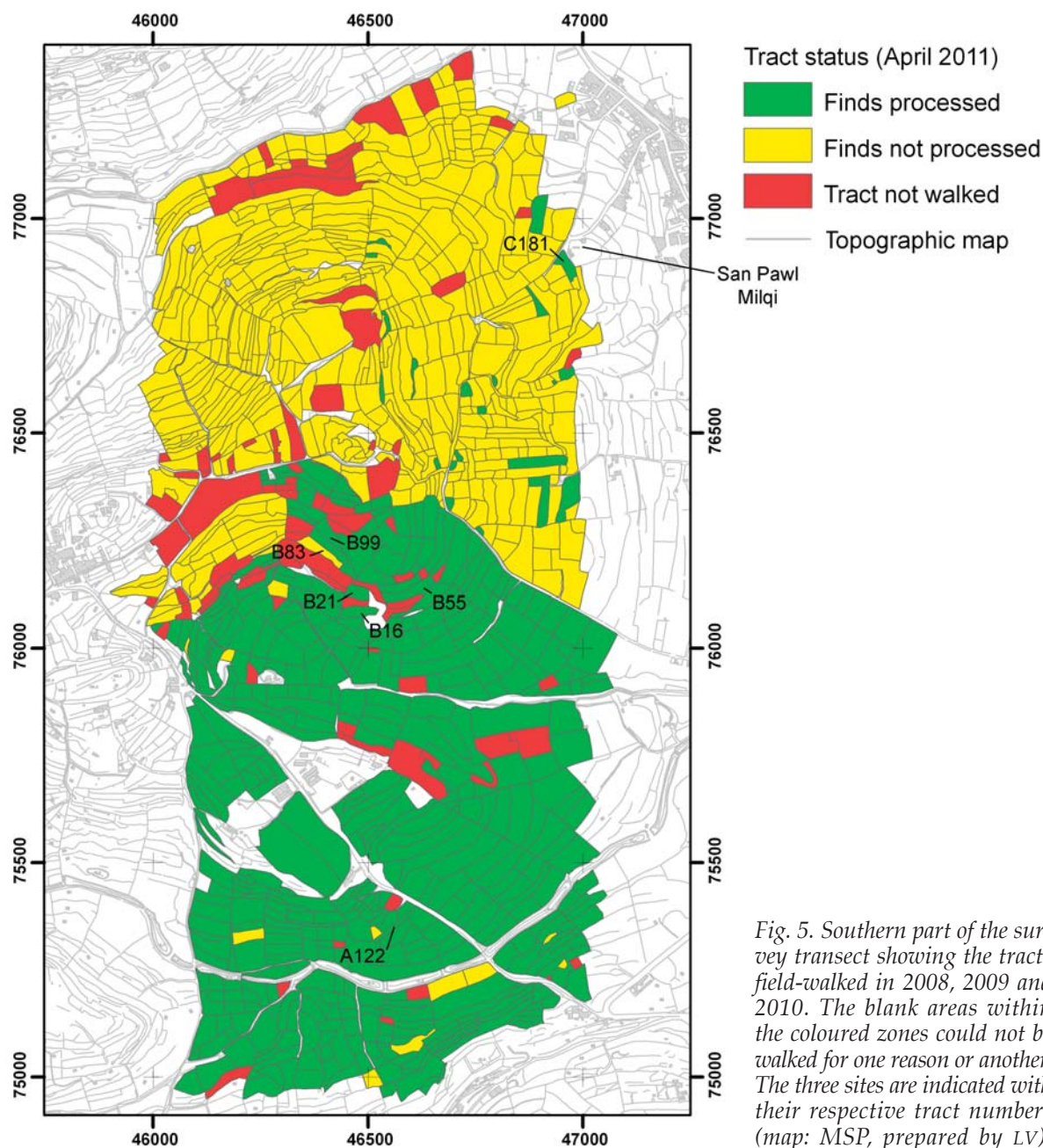


Fig. 5. Southern part of the survey transect showing the tracts field-walked in 2008, 2009 and 2010. The blank areas within the coloured zones could not be walked for one reason or another. The three sites are indicated with their respective tract numbers (map: MSP, prepared by LV).

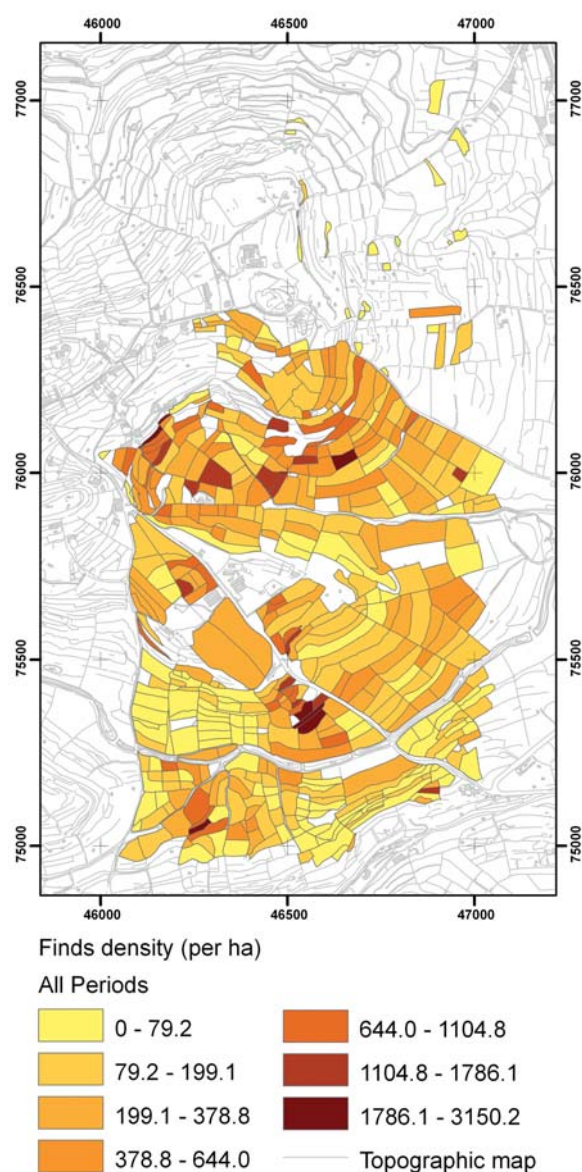


Fig. 6. Finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

stones, shells and undefined artefacts. Specific maps per period are based on datable finds only (figs 9-14). Often, it proved impossible to assign a precise date to pottery or other artefacts, as when an object was dated from the Hellenistic period to Late Antiquity. The dating of these objects was therefore considered as undetermined, and they were not included in the maps related to one specific period. The distribution maps take account of all finds collected on the passes of the surveyed

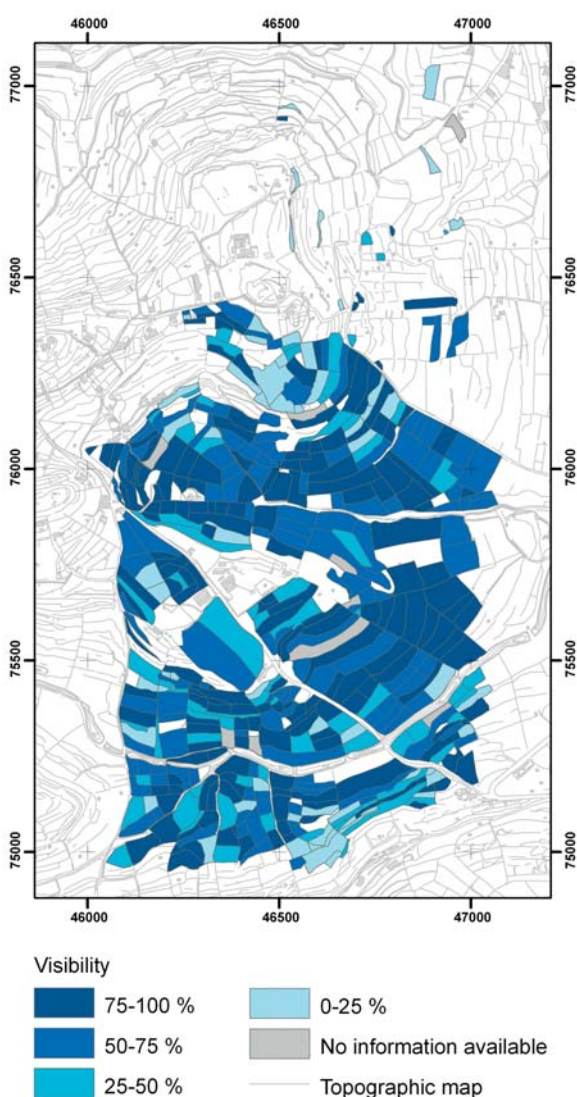


Fig. 7. Visibility of all tracts of which the finds have been studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

tracts, but for reasons of comparability do not include the finds separately collected on (suspected) sites during a 'block survey' (see above).

The finds' quantities were normalized by means of the tract area (densities are given per ha). For each quantity, seven classes were created using the natural breaks function in ESRI ArcGIS 9. Visibility conditions, land use and other factors were different throughout the prospection area. Densities have not been corrected for these dif-



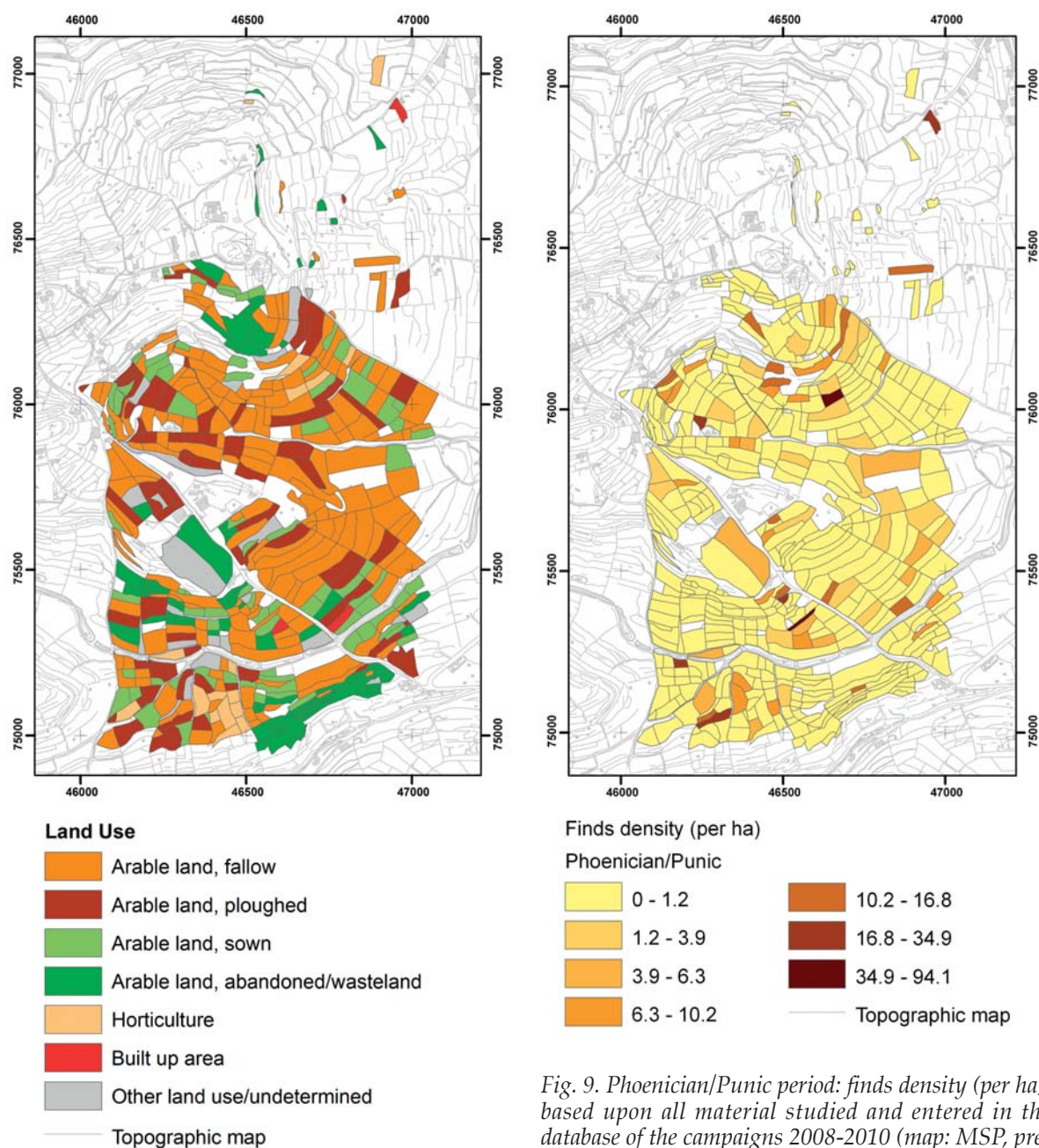


Fig. 8. Land use of all tracts of which the finds have been studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

ferent field-walking circumstances, but visibility and land use are shown in figs 7-8.<sup>30</sup>

The picture emerging from the finds distribution of the Phoenician/Punic period (fig. 9) shows a fairly good coverage of the landscape with a tendency to cluster on the terraces just below the

Fig. 9. Phoenician/Punic period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

garigue escarpments. The planned collocation of these data with the Digital Elevation Model (see above, fig. 4) may highlight this tendency even better. For the Hellenistic/Roman period, the distribution pattern that focuses upon terraces below the escarpments is extremely clear (fig. 10). Especially when extracting the distribution data of ceramic and non-ceramic building material of that period (fig. 11), it is clear that we are dealing with



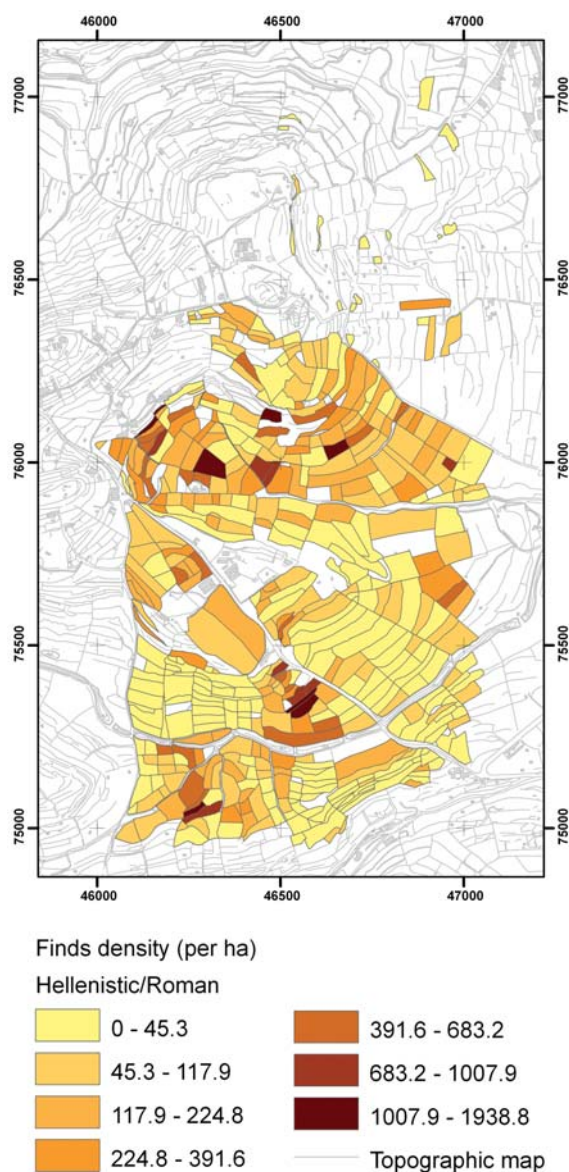


Fig. 10. Hellenistic/Roman period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

two clusters of inhabited sites within the survey area of which the finds have been intensively studied (see below for the characterization of these sites). A cluster in the south-western part of the survey transect (fig. 9), already emerging in the Phoenician/Punic period (fig. 10), is either a site of a less permanent character, in view of the absence of building material (fig. 11) or the result of a recent dump of material brought in from else-

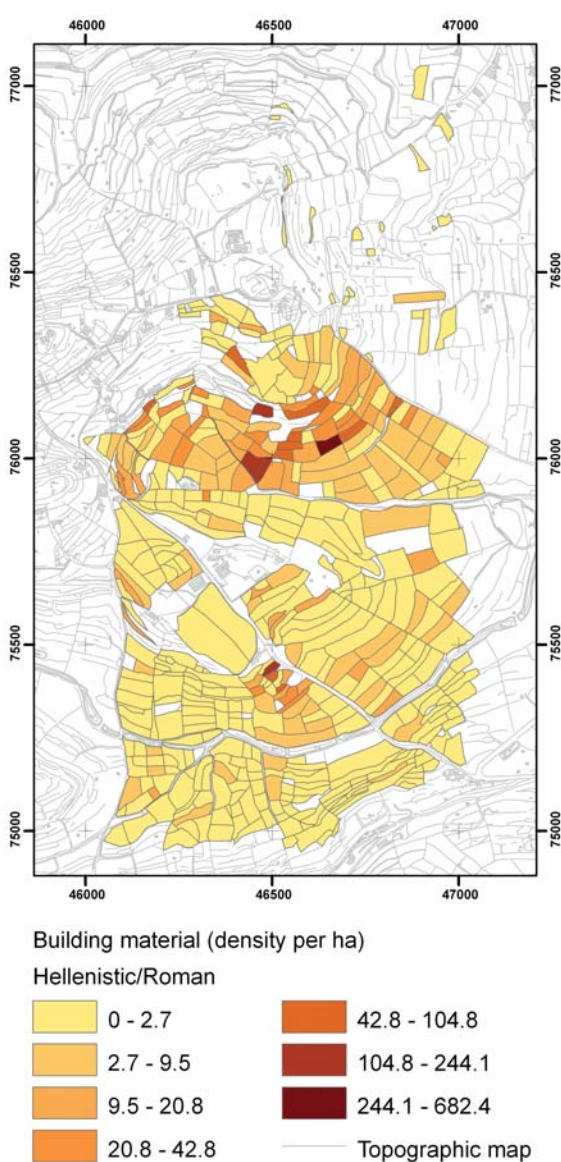


Fig. 11. Building material of the Hellenistic/Roman period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

where on Malta and containing earlier material.<sup>31</sup> For the Late Antique period (fig. 12) it seems that the finds densities continue along the lines set out in the Phoenician/Punic period, but in the western part of the survey an offspring of the central site within the transect seems to pop up. This is exactly the area where the present town of Bidnija is situated. This emerging site seems to continue into the following Early Medieval (fig. 13) and

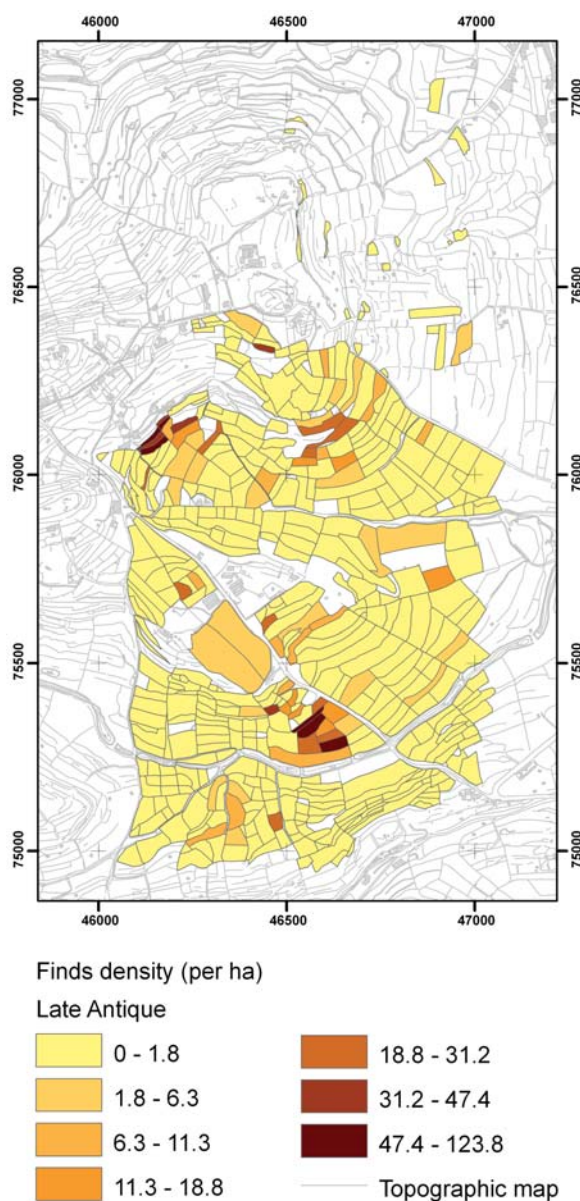


Fig. 12. Late Antique period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

High Medieval period (fig. 14), whereas the finds densities on the main central site seems to thin out.

LV, NCV, RFD, NC

#### SITE IDENTIFICATION AND CHARACTERIZATION

In the context of the present preliminary contribution we will limit our discussion to sites of the

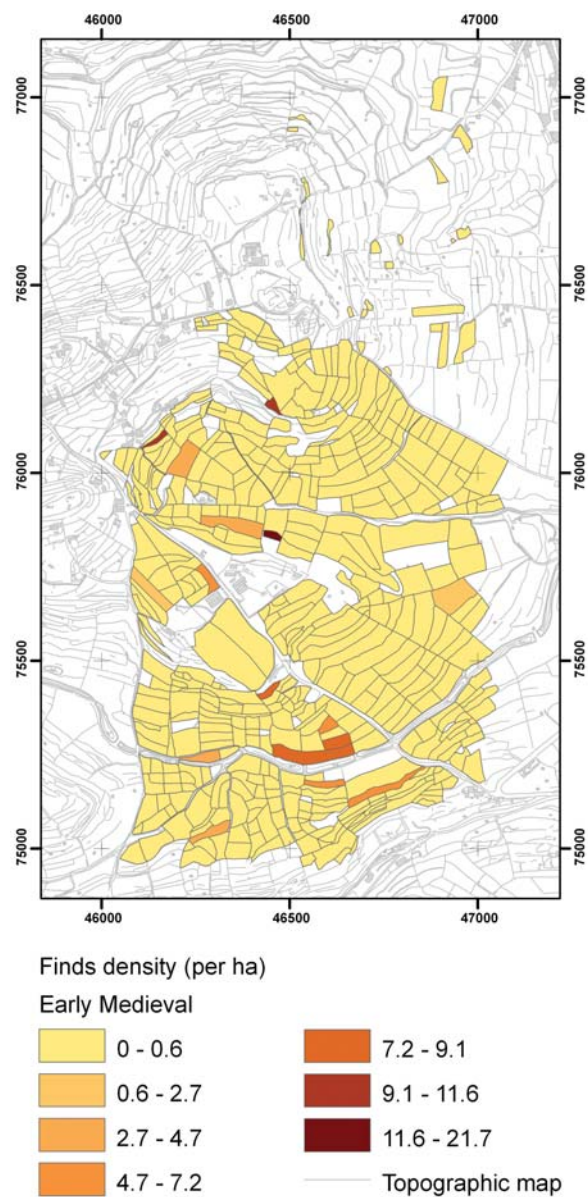


Fig. 13. Early Medieval period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

1<sup>st</sup> millennium BCE, since a clear distinction of 'sites' of other periods may only be feasible after the whole survey transect has been covered and the finds of all tracts have been studied in detail (see above). Within the transect, three clear sites dating to the Phoenician/Punic period till at least Late Antiquity were identified and could be (re-) explored: Gebel Ghawzara (pronounced Jebel



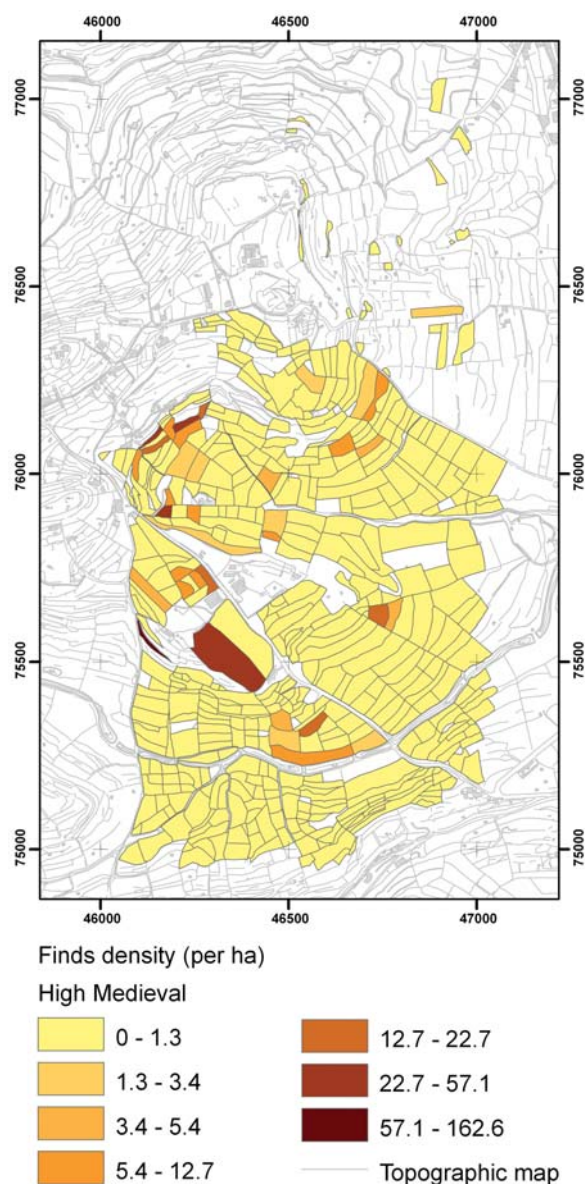


Fig. 14. High Medieval period: finds density (per ha), based upon all material studied and entered in the database of the campaigns 2008-2010 (map: MSP, prepared by LV).

Awzaara), Tal-Għazzi (pronounced Tal-Aatsi), and San Pawl Milqi (see fig. 5).<sup>32</sup>

The first site (Gebel Ghawżara), in fact, consists of several contiguous tracts. The site is centred round an area with an old olive grove and an extensive bamboo bush which is indicative of a water source, already shown in an 1838 cadastral map of the area (fig. 5).<sup>33</sup> The site has been known to

be the location of a farmstead, probably of Roman date, for a long time. In 1911 or 1912, stone troughs and fragments of an olive pipper (or *trapetum*) were found here.<sup>34</sup> In the brief report of the discovery, it was noted that 'the whole place deserves further study as traces of foundation walls are visible and potsherds are plentiful in the vicinity', but the site was left unexplored.<sup>35</sup> Sometime in the mid-1970s one of the present authors (AB) accompanied the professor of Latin at the University and monsignor of the Mdina Cathedral, Rev. Edward Coleiro, to the area when farmers reported that a mechanized rotary soil tiller fell into a large hole where large blocks of stone (one of which with painted plaster) could be seen about 40 cm below the surface.

The pottery collected on tract B21 during the survey is predominantly of Roman date but the site must have a pre-Roman, Punic, phase too as the discussion of the finds below shows (*Cat.* 44-46, fig. 29, cf. fig. 28). The GPR survey has revealed evidence of a large rectangular structure at the western end of the field, probably related to the villa.<sup>36</sup> Future excavation will have to show whether we are dealing with a Roman/Late Antique or an earlier Phoenician/Punic structure. On the site, just below a large carob tree, a vat cut into a large limestone block was found and documented (fig. 15). It is probably one of the stone troughs reported early last century and it belongs to a type well known from other Roman villa sites in Malta, including the San Pawl Milqi establishment located about a kilometre away on the other, eastern, side of the Gebel Ghawżara slope (fig. 5).<sup>37</sup>

In 2003, archaeologist Timothy Gambin, found the base of a late 5<sup>th</sup>- or 4<sup>th</sup>-century BCE Punic painted amphora (*Cat.* 39, fig. 27) while prospecting the area and surveying the olive grove as part of his doctoral studies. Having remained unpublished, it was decided to have it included in the survey finds, also because its precise find spot could be established by Gambin as tract B16. That tract yielded more material of Phoenician/Punic date (see *Cat.* 40-41, fig. 27).

A related location, corresponding to tracts B83 and B99, was also subjected to a GPR survey. It confirmed that the large rectangular cistern, rock-cut and lined with waterproof mortar, still visible at the surface, extended below the field. The survey also revealed a series of linear anomalies, some of which meet at right angles, which may correspond to a system of channels related to water management or, as appears more likely, limestone quarrying. Pottery counts, on the contrary, were rather low and would otherwise not be indicative of the presence of a site.



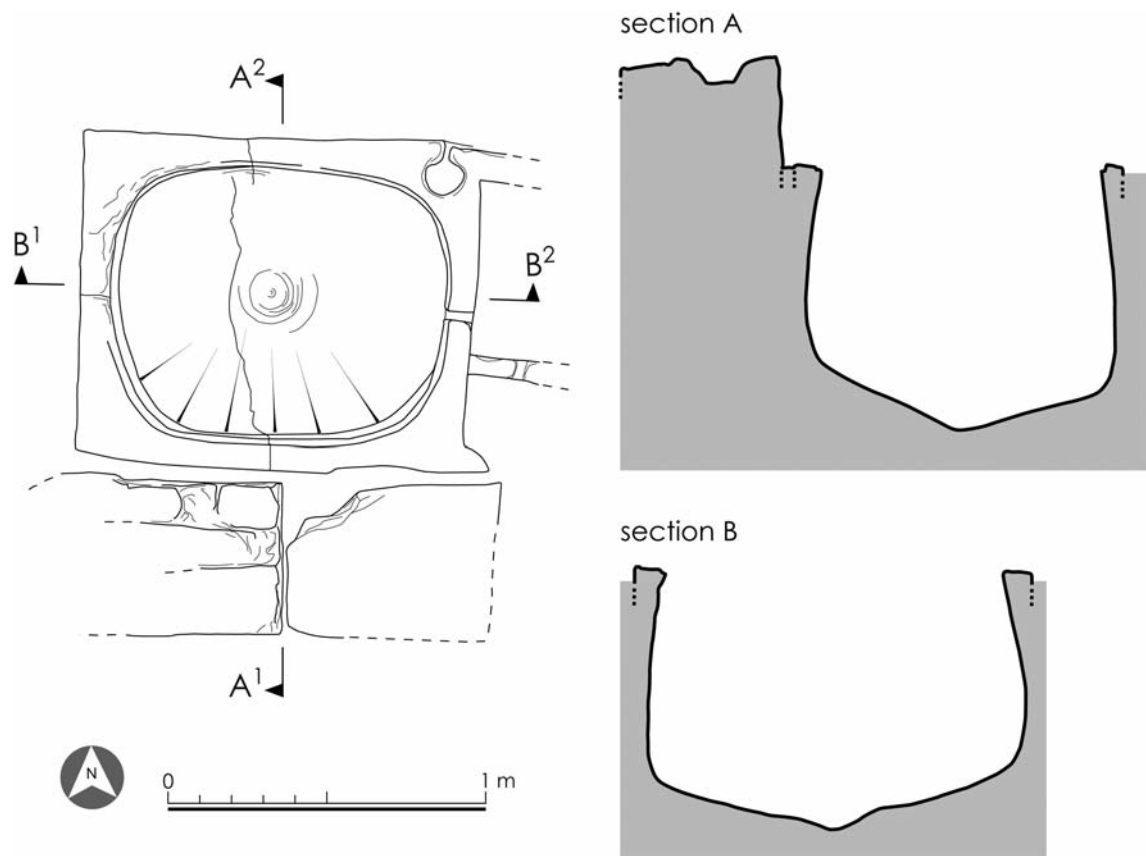


Fig. 15. Limestone vat, probably of Roman date, located in tract B21 – MSP2008/1/B21/F1 (drawing: Malta Survey Project, by RZ, digitised by MA).

A last tract belonging to this larger site or archaeological complex corresponds to a large but rather narrow field (tract B55; *fig. 5*). During the 2009 campaign, the pottery collected by field-walkers the previous year was studied by one of the pottery specialists (*WvdP*). He noticed that the finds were much more typical of a site, in view of the large amount of pottery sherds and building debris (fragments of tiles, brick, cistern lining, and fragments of plaster render), than for the regular background scatter of pottery often associated with past manuring activities.<sup>38</sup> The ashlar blocks observed at the base of the rubble retaining wall of the same field on its southern side, which had clear traces of mortar, also suggested that buried remains exist here. Moreover, interviews with tenant farmers suggest that this was in fact the field visited by Coleiro and Bonanno in the early 1970s. The site was therefore chosen for block survey and more than 1,200 artefacts were collected, with pottery dating to the Phoenician/Punic, Roman, Late Antique and Medieval

periods. The GPR survey carried out on this field produced spectacular readings at different depths: a large rectangular building to the east of the field, probably of Late Roman date, a building with two apses in the centre, either ecclesiastical of Medieval date or Roman or Late Antique of a secular nature (possibly a bath), as well as a cluster of buildings and structures towards the west where some Phoenician/Punic pottery was clustered (see also below, *fig. 17*).

The tracts mentioned above are relatively close to each other and are considered as forming part of one extended rural installation. Besides, two more rural sites have been identified in the 2008-2009 seasons. The first consists of a large concentration of building material and pottery fragments of Phoenician/Punic, Roman and Medieval date in tract A122, just off the main road to Bidnija (*fig. 5*). Unfortunately a GPR survey in this field did not yield any architectural remains in the subsoil. The extent of the sherd concentration, covering also adjacent fields, seems to exclude the

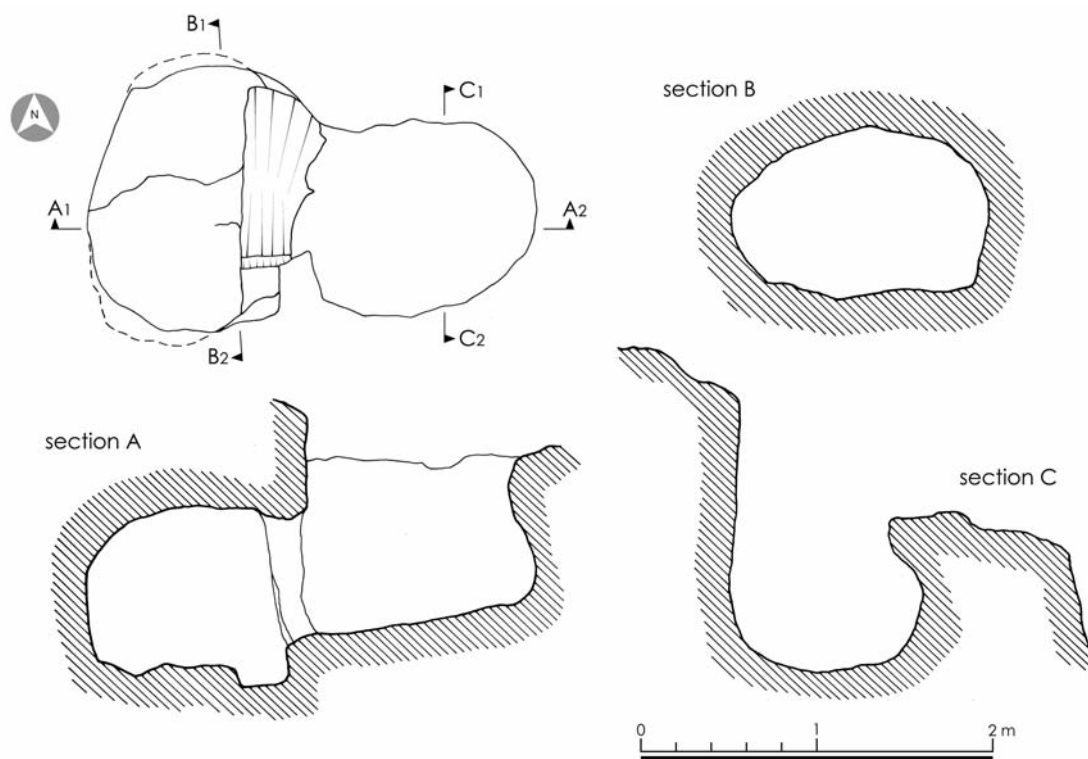


Fig. 16. Rock-cut tomb of Phoenician/Punic period on garigue area in tract B69, above tract B55, dated to the 6<sup>th</sup> or 5<sup>th</sup> century BCE – MSP2008/1/B69/F1 (drawing: MSP, by MA and NCV, digitised by MA).

possibility that we are dealing with a localised secondary dump of habitation material brought in from elsewhere. It is more likely that the concentration of pottery is related to an ancient unlocated rural establishment further up the hill, where an 18<sup>th</sup>-century CE farmstead (Tal-Għażzi) was built near a spring of water reached by a rock-cut gallery.<sup>39</sup> Behind the farmstead, in an area of garigue, a rock-cut rectangular feature has been recorded. It is very likely that this is the shaft of a Punic or Roman shaft-and-chamber tomb.

The third and last site encountered during the survey campaigns is the well-known rural villa site of San Pawl Milqi, explored by an Italian Archaeological Mission to Malta in the 1960s.<sup>40</sup> The villa falls just outside the survey transect but the adjacent fields within the survey transect yielded high concentrations of finds, mainly of Punic and (Late) Roman date (e.g. in tract C181; *Cat.* 9; *fig.* 20, see also *figs* 5, 9). Most of these tracts, however, have not yet received full and detailed study of the finds, so that any further comments - by necessity in relation with the published results of the Italian excavations of the site - will be left for the future.

In all, the MSP has yielded three rural sites, where we have clear evidence for human occupation in the Phoenician/Punic and Roman periods. The position of these rural sites in the landscape is also marked by the presence of no less than four rock-cut tombs, lying in three clusters. It is remarkable that one of these tombs has - up till now - no relation to a recognised site lying nearby. Three of the tombs are rectangular in shape, and may well be of Late Punic or Roman date, but one is of an earlier type. The rock-cut shaft is rounded and gives entrance to an equally rounded burial chamber. This feature is rather typical of rock-cut tombs of the Punic period, perhaps even as early as the 6<sup>th</sup> or 5<sup>th</sup> century BCE (*fig.* 16).<sup>41</sup> This particular tomb, lying close to the escarpment, is situated just above tract B55 of the Ġebel Għawżara site just described. To our knowledge, the four tombs have not been previously recorded, although they all seem to have been emptied in the past. An isolated find from higher up the plateau may well have originated in such 'excavation' or grave-robbing activities: this is a fragment of a Punic lamp of Deneauve's type VII or VIII, dated to the 4<sup>th</sup> or 3<sup>rd</sup> century BCE (*Cat.* 60, *fig.*

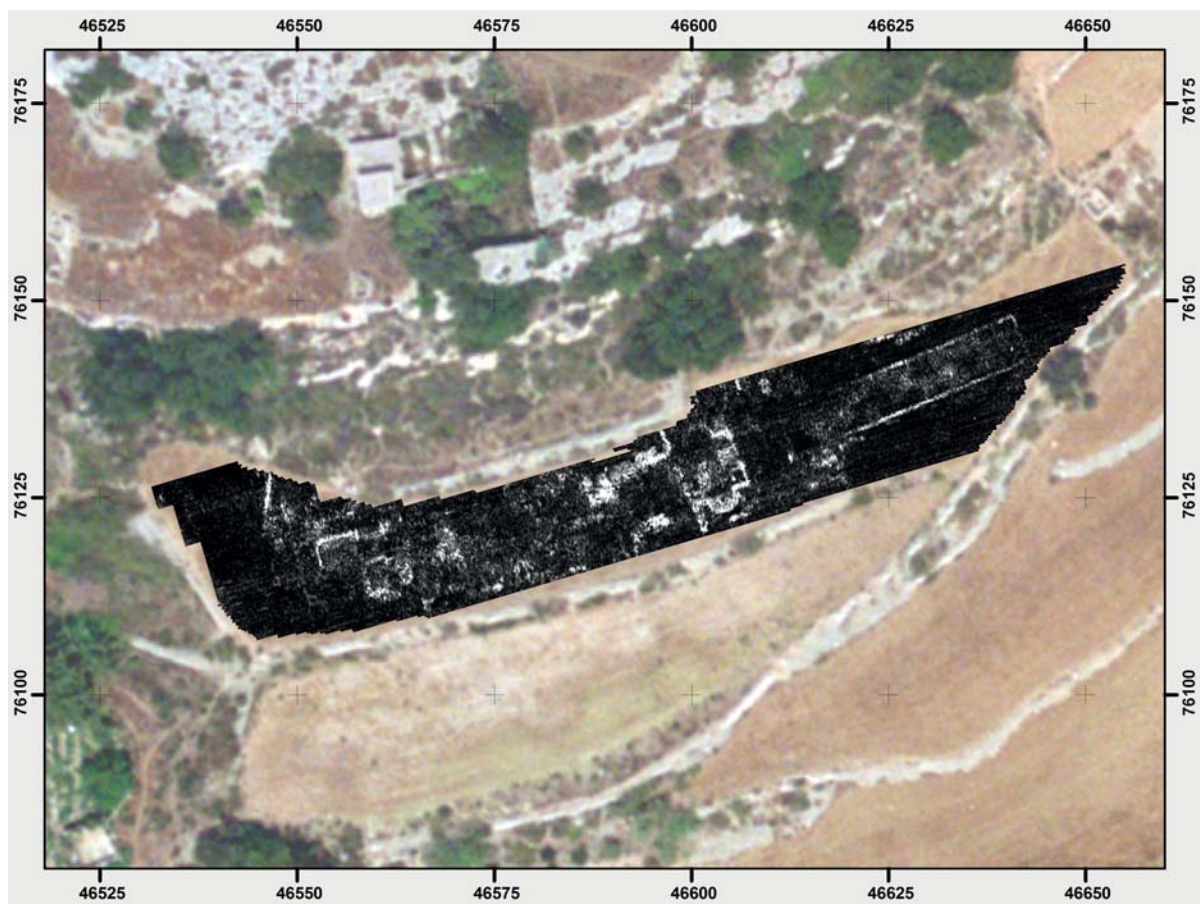


Fig. 17. Horizontal Ground Penetrating Radar (GPR) slice from tract B55 at an estimated depth of 0.80-0.85 m, projected onto an orthophotograph of the area. On the GPR slice, white areas represent strong reflections indicating the presence of buried structures; in the dark areas, radar waves were not reflected or the reflection was weak (Image: MSP, prepared by LV).

33). Also the San Pawl Milqi villa has given excavated evidence of graves pertaining to the Punic period: a rock-cut rectangular chamber tomb T5 was found empty, but containing a fill with material of the 3<sup>rd</sup> to 2<sup>nd</sup> century BCE.<sup>42</sup> It was situated at the north-western perimeter of the villa site and may well have belonged to the preceding Punic occupation of the site. The same site has also yielded a Punic funerary stele with inscription showing a standard funerary formula: 'Banay [or Ba'alay] son of Himilk son of (...)'.<sup>43</sup> The stele was found in secondary position, re-used in the foundations of the 17<sup>th</sup>-century CE church dedicated to St Paul, built over the remains of the villa. Although theoretically it could have been brought in from elsewhere in the area, it is more likely that it stemmed from the villa site itself; given the amount of available building material on the spot, there would

hardly have been any need to bring in more from farther afield.

The fact that the three sites recognised in the survey have given ample and concentrated evidence of architectural remains as floor and roof tiles, flooring, cisterns, etc. (see fig. 11) as well as evidence of graves, is highly suggestive of habitation sites that were permanently inhabited. All these sites lie at very short distances from each other along the escarpments of the garigue plateaux; the intermediate distances were ca 1 km and 700 m respectively. The finds of olive oil processing equipment on two of these sites (Gebel Ghawżara (fig. 15) and San Pawl Milqi) means that we are dealing with agricultural establishments that at least from the Roman period on centred on the (surplus) production of olive oil.<sup>44</sup>

RFD, NCV, NC, AB, AP



As an integral part of the survey strategy it has been foreseen that those tracts where large concentrations of finds suggested the existence of ancient sites, would be investigated with a ground-penetrating radar (GPR). This was essentially done to confirm whether the high concentration of pottery sherds and other artefacts collected from the surface relate to buried structural remains. In so doing, the possibility that the artefact concentration could be the result of secondary soil dumping, often done to improve field depth and soil quality, was considered and eliminated. Moreover, the GPR can produce a good image of any buried remains, particularly structural features, even in Maltese soils as trials carried out between 26 and 30 April 2008 had shown.<sup>45</sup> Three areas or 'sites', one located along the southern escarpment of the Ġebel Ġhawżara plateau (B55) and two below it (B16 and B21), to the east of the present-day village of Bidnija, were chosen for block and GPR survey; all three produced very promising results and ceramic evidence dating also to the Phoenician/Punic period (see above).

By way of example, the results of the GPR survey on tract B55 are discussed. A Sensors & Software pulseEKKO PRO GPR was used with an antenna of centre frequency 500 MHz. Transects with a separation of 0.25 m were walked in zigzag mode (i.e. the first transect in ENE direction, the second one in WSW direction etc.). Along each transect, measurements were taken every 5 cm by means of an odometer wheel. Transects were materialized by guide ropes, within a grid laid out with a total station. This resulted in a set of vertical sections. These raw data were processed in Matlab. Processing included band-pass filtering (removing very low and high frequencies), amplifying the waves reflected by deeper structures (which are weaker as they have been travelling longer through the soil), removing linear noise caused by the instrument, and migration (a reconstruction of the true geometry of the buried structures by removing diffraction hyperbolae). Finally, the vertical sections were converted to horizontal slices with a thickness of 5 cm. Fig. 17, a horizontal slice at an estimated depth of 0.80-0.85 m, shows several structures probably belonging to a Roman or Late Antique villa and its possible predecessor of the Punic period. One of the rooms has two apses and might be interpreted as baths. The easternmost, long rectangular structure may perhaps be compared with a similar structure found on the San

Pawl Milqi villa site (see below). The remains show slightly different orientations, following the slope.

LV

#### SELECTED FINDS OF ALL PERIODS<sup>46</sup>

Of the 29,309 finds that have been entered in the database, ca 300 have been studied in a more detailed manner, recorded with profile drawings, photographs and detailed fabric descriptions by several specialists (BB, RFD, MA, NC) with a view to final publication; 129 of these have been included in the reference collection. The guiding principle has been the study of all material from sites recognised during the survey. Apart from this context- or site-based study, a selection of diagnostic finds from 'off-site' areas in the survey transect has been studied by individual specialists (BB, NC, CV, JW).

As an impression for the range and scope of the finds encountered during the MSP, and in view of the fact that hitherto so little finds have been published from rural Malta (except of course from the San Pawl Milqi excavations), a small diachronic selection is presented and discussed here.

#### *Prehistoric Periods*

*Cat. 1:* MSP2008/1/B155/P2/4, 1 proximal flake, debitage (*fig. 18*).

Flint: very dark gray (2.5 YR N3/), light gray (5 YR 7/1) at and near flaked parts. L 2.6, W 1.9, mid Th 1.1, max. Th 1.2. Complex striking platform.

This un-datable lithic was originally deemed as worked. However, on close inspection, one should leave open the possibility that the micro-detachments evidenced on the margins of this lithic are in fact a by-product of plough soil damage. As such, *Cat. 1* is illustrative of the many 'lithic' fragments found in the survey that are definitely not to be considered as artefacts.

*Cat. 2:* MSP2008/1/B136/P7/1, 1 exhausted core (*fig. 18*).

Flint: pinkish gray (7.5 YR 6/2) to white (10 YR 8/1), with some white and brown streaks. L 4.5, W 2.5, mid Th 2.0, max. Th 2.2. Simple striking platform.

This lithic, seemingly of Neolithic date, is made from a fine imported flint. Probably hailing from the Monti Iblei flint outcrops, this exhausted core fragment is typical of Maltese lithic technology. In particular, Maltese Neolithic cores seem to originate from pebble-sized nodules that are often knapped until the edges become too steep and therefore limiting any further knapping. In this lithic's case, since the material in question is imported and therefore valued, the lithic was rejuvenated repeatedly and abraded to provide new possibilities for flake detachment.

*Cat. 3:* MSP2008/1/F112/P10/1, 1 bimarginal tool, blade (*fig. 18*).

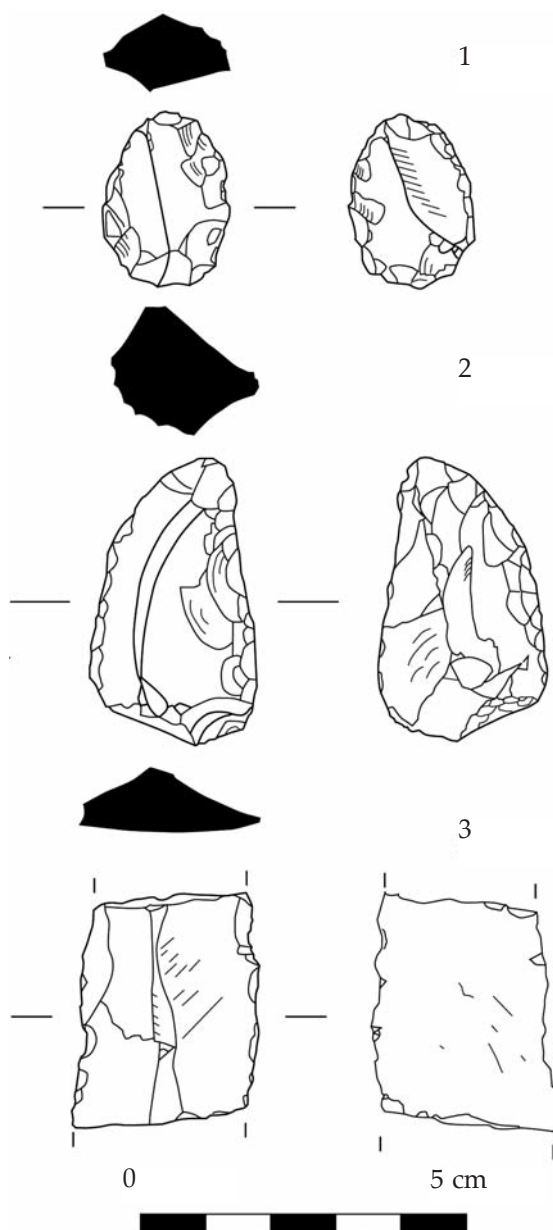


Fig. 18. Selected lithic objects of the Prehistoric period, Cat. 1-3 (drawing: MSP, by MA, digitised by Joris Angenon).

Flint: light gray (10 YR 7/2). PL 2.4, W 1.6, mid Th 0.8, max. Th 0.9.

This lithic fragment is a type of broken unretouched blade found across other Neolithic Maltese sites including Ta' Hagra<sup>47</sup>. Currently at 2.4 cm in length, this unretouched blade can be approximated as originally standing at 3.5-4.0 cm. It is also worth noting that this lithic has no proximal or distal end due to use and was probably hand-held. As in other Maltese sites, blades

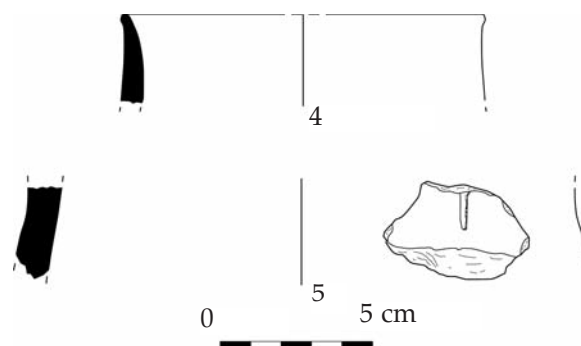


Fig. 19. Selected pottery of the Prehistoric period, Cat. 4 (carinated) bowl of the Tarxien phase; Cat. 5 open vessel in Borg in-Nadur Ware (drawings: MSP, by RFD, digitised by Joris Angenon).

manufactured from imported stone tend to lack intentional edge retouching. This appears to reflect a preference for imported flints that can be knapped at thinner thicknesses, leading to sharper blade edges that require no further retouching. Furthermore, the lack of intentional retouching also suggest that the lithic was used longitudinally as a cutting and not a serrating implement on soft to medium materials.

Cat. 4: MSP2008/1/B64/W1/1, 1 rim fragment of a (carinated) bowl (fig. 19).

Medium fired, rather thin-walled, fine grayish brown clay (2.5 Y 5/2) tempered with few dark grey particles (0.2-0.3mm) and few white (lime?) particles (0.2mm), gray (5 YR 7/6) on surfaces; lime encrustations all over. Diam. Rim 12, PH 3.0.

The fragment clearly belongs to a grey ware vessel of the Temple period, dating to the Tarxien phase (c. 3000-2500 BCE). The shape probably belongs to the classic carinated offering bowl form classified by Evans as his shape 41/42.<sup>48</sup> This type of bowl is frequent in most temple sites and funerary hypogea in Malta and Gozo.<sup>49</sup>

Cat. 5: MSP2008/1/D79/P2/1, 1 fragment of large open vessel (fig. 19).

Medium fired, coarse handmade, reddish brown clay (5 YR 4/3) with angular and sub-rounded stone particles (2mm), pink (7.5 YR 7/4) on exterior, burnished, dark gray (5 YR 4/1) on interior, burnished. Vertical scratch before firing. PH 3; max. Diam. 18.

The fragment belongs to the handmade pottery repertoire also known as Borg in-Nadur Ware, which is dated to the Maltese Middle and Late Bronze Age (ca 1450-850 BCE) and would come close to Tanasi's fabric 5 (Coarse Ware, which has a roughly polished surface);<sup>50</sup> it is difficult, however, to make out the original shape.

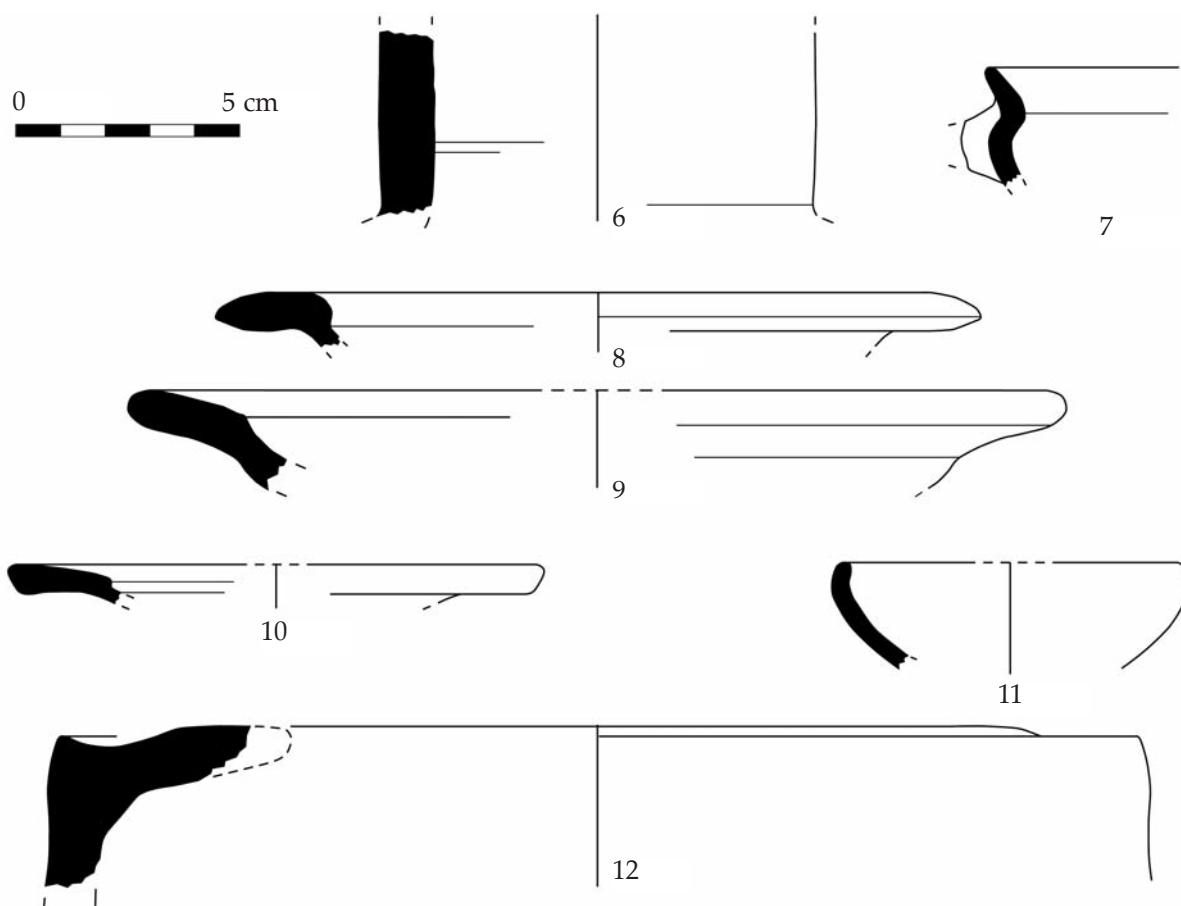


Fig. 20. Selected pottery of the Phoenician/Punic period, Cat. 6 Corinthian A transport amphora; Cat. 7 local skyphos/kylix; Cat. 8-10 local plates; Cat. 11 local bowl; Cat. 12 Carthaginian transport amphora (drawings: MSP, by RFD, digitised by Joris Angenon).

#### Phoenician/Punic Period

*Cat. 6:* MSP2008/1/A112/P3/2, 1 neck fragment of Corinthian A transport amphora (fig. 20). Hard fired light brown (7.5 YR 6/4) clay with light yellowish brown core (10 YR 6/4) containing some dark brown to reddish brown angular mudstone (0.2-3.0 mm), pink (7.5 YR 7/4) surface. PH 4.1; Diam. neck 10. The clay of this fragment is very characteristic of Corinthian A type transport amphorae as defined by C.G. Koehler.<sup>51</sup> These handmade or rather hand-built olive oil containers knew a very wide distribution from the 8<sup>th</sup> to the 5<sup>th</sup> century BCE. The rather narrow neck of the present piece is more characteristic of versions of the (last quarter of the) 6<sup>th</sup> and first quarter of the 5<sup>th</sup> century BCE, a period in which these vessels were still widely distributed in the Mediterranean and the Black Sea.<sup>52</sup> Especially Gela and Camerina in southern Sicily seem to have been well served, which is of some interest given their relative closeness to Malta.<sup>53</sup> Carthage, on the contrary, has yielded relatively few of such vessels (8 from the settlement and none from the necropoleis).<sup>54</sup>

Thereafter, during most of the 5<sup>th</sup> and the 4<sup>th</sup> centuries BCE, Corinthian A type amphorae seem to be confined primarily to Corinth itself.

*Cat. 7:* MSP2008/1/D2/P2/2, 1 rim fragment with handle root of a local skyphos or kylix (fig. 20). Medium fired, soft reddish yellow (5 YR 6/8) clay with few small white (lime) and red inclusions, surface very eroded (no trace of slip or other decoration). PH 2.5; Diam. rim ?

The sanctuary site of Tas-Silġ in south-east Malta has provided evidence of several local skyphoi of this type, very comparable to *Cat. 7*.<sup>55</sup> For Malta, the shape has been discussed by A. Ciasca,<sup>56</sup> and Sagona.<sup>57</sup> These drinking vessels occur also without handles in the Maltese repertoire. Sagona dates the shape to her Late Phase I and Phase II, i.e. to between 620 and 500 BCE. In comparative perspective this is to be considered as a fairly late date for the adaptation of this particular Greek form. Indeed, also from a morphological point of view, the Maltese versions seem to adapt more closely the late 7<sup>th</sup>- and 6<sup>th</sup>-century BCE East-Greek kylikes



than the general (Sub-)Geometric skyphoi of the 8<sup>th</sup> and 7<sup>th</sup> centuries BCE, whatever this may imply.<sup>58</sup> The survey has yielded several fragments of such cups.

*Cat. 8:* MSP2008/1/D70/P6/1, 1 rim fragment of a local plate (*fig. 20*).

Hard fired red (2.5 YR 5/6) clay with grey core, containing some voids (0.1-0.4 mm), some very fine quartz 0.1 mm, isolated foraminifera, surface weak red (2.5 YR 5/4). PH 1.2, Diam. rim 17.

The re-study of older finds from excavations of the Italian archaeological mission in Tas-Silġ ('area nord') by A. Quercia has provided us with the best typological study of the most common pottery types occurring in the sanctuary. Plates figure prominently amongst these finds.<sup>59</sup> The particular rim shape of *Cat. 8*, however, finds no parallel within the plate typology established by Quercia and it may be suspected that in this case we are dealing with an older type of the 8<sup>th</sup>, 7<sup>th</sup> or 6<sup>th</sup> century BCE. It might have belonged to a plate of A. Peserico's type P1.I, which finds its main distribution in Carthaginian contexts of the second half of the 8<sup>th</sup> and the first half of the 7<sup>th</sup> centuries BCE.<sup>60</sup> Although it can still be found in contexts of the following hundred years, Peserico pleads for a production till the middle of the 7<sup>th</sup> century BCE. However, the fact that the present fragment is of local Maltese production and, hence, may have been subject to a different morphological development than the Carthaginian plates, should warn for placing too high dates to the fragment.

*Cat. 9:* MSP2008/1/C181/W101/1, 1 rim fragment of local plate (*fig. 20*).

Hard fired light red (2.5 YR 6/8) clay with many small white and yellowish particles, probably foraminifera (0.2-0.3 mm), and some red particles (1-2 mm) [sample no 59], surface covered with secondary white calcareous deposit (2.5 Y 8/2). PH 2.3, Diam. rim 21.

The rim may be compared to several complete profiles excavated in the sanctuary of Tas-Silġ: two from the 'area sud', with suggested dates of the 5<sup>th</sup> and 5<sup>th</sup>/4<sup>th</sup> centuries BCE, respectively.<sup>61</sup> The first one shows a lesser inclination, though. Also two plates from 'Fossa II' in the 'area nord' are very comparable.<sup>62</sup> The finds in the context are dated to the last quarter of the 4<sup>th</sup> century BCE. The recent typology of plates by Quercia, would range this particular rim shape within his type 5, which on the basis of a sound seriation is dated to the 5<sup>th</sup> but more frequently to the 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE.<sup>63</sup>

*Cat. 10:* MSP2008/1/D23/P3/1, 1 rim fragment of local plate (*fig. 20*).

Hard fired light red (2.5 YR 6/8) clay with fine foraminifera and lime inclusions, surface fired grey. PH 0.9, Diam. rim 12.

The squarish rim end of *Cat. 10* may be compared to a plate with painted lines excavated in the 'area sud' of the sanctuary of Tas-Silġ, which is tentatively dated to the 5<sup>th</sup> century BCE.<sup>64</sup> Another plate with comparable morphology from Tas-Silġ has been published from 'Fossa II', dated to the last quarter of the 4<sup>th</sup> century BCE.<sup>65</sup> The rim shape does not find an exact parallel in the plate typology of Quercia, but given the comparatively small rim diameter it may rather have belonged to his class of 'piattelli' or small plates.<sup>66</sup>

*Cat. 11:* MSP2008/1/A42/P2/1, 1 rim fragment of local bowl (*fig. 20*).

Hard fired light red (2.5 YR 6/8) clay with some limestone inclusions (0.1-0.2 mm and few 0.5-1.0 mm), surface reddish yellow (5 YR 7/8). PH 2.3, Diam. rim 8. The small bowl is a Maltese version of the Attic saltcellar 'later and light', the originals of which occur not earlier than the late 5<sup>th</sup> and 4<sup>th</sup> centuries BCE.<sup>67</sup> These local versions of these Attic bowls with incurved rim (both small and large ones) are fairly common in the ceramic repertoire of Punic Malta, as M.P. Rossignani already observed in 1973. She dates the examples in the sanctuary of Tas-Silġ to the 5<sup>th</sup> century BCE, those with slip and lighter and more levigated clay to the first half of the 4<sup>th</sup> century BCE; dates that probably should be corrected for the smaller versions as *Cat. 11*.<sup>68</sup> Original Greek Black Glaze versions of such bowls have been found in Tas-Silġ too.<sup>69</sup> The recent typology of Maltese pottery of the Phoenician/Punic period of Quercia also discusses these bowls, with generally lower dates, though.<sup>70</sup>

*Cat. 12:* MSP2008/1/B99/P3/1, 1 rim fragment of Carthaginian transport amphora (*fig. 20*).

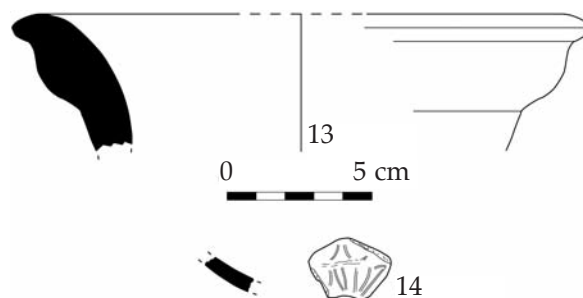
Hard fired red (2.5 YR 5/6) clay with many well-sorted rounded quartz (0.2-0.3 mm), 'KTS', surface reddish yellow 5 YR 6/6). PH 3.7, Diam. rim 24.

The amphora may be attributed to J. Ramón's type T-5.2.3.1, of Carthaginian production.<sup>71</sup> This type of amphora is dated to the last quarter of the 3<sup>rd</sup> and the first quarter of the 2<sup>nd</sup> centuries BCE, although the present fragment may still be assigned a date in the 3<sup>rd</sup> century BCE. A comparable amphora stored at the National Museum of Archaeology in Valletta has been published.<sup>72</sup> The fabric description ('pinkish-brown fabric') is vague enough to include a Carthaginian production for this amphora too.

### Hellenistic Period

*Cat. 13:* MSP2008/1/A61/P5/1, 1 rim fragment of Carthaginian transport amphora (*fig. 21*).

Hard fired light red (2.5 YR 6/6) clay with many well-rounded quartz (0.2-0.3 mm), 'KTS', surface reddish yellow (5 YR 6/6) and few traces of a yellowish scum. PH 4.8, Diam. rim 20.



*Fig. 21. Selected pottery of the Hellenistic period, Cat. 13 Carthaginian transport amphora; Cat. 14 imported mould-made relief bowl (drawings: MSP, by RFD, digitised by Joris Angenon).*

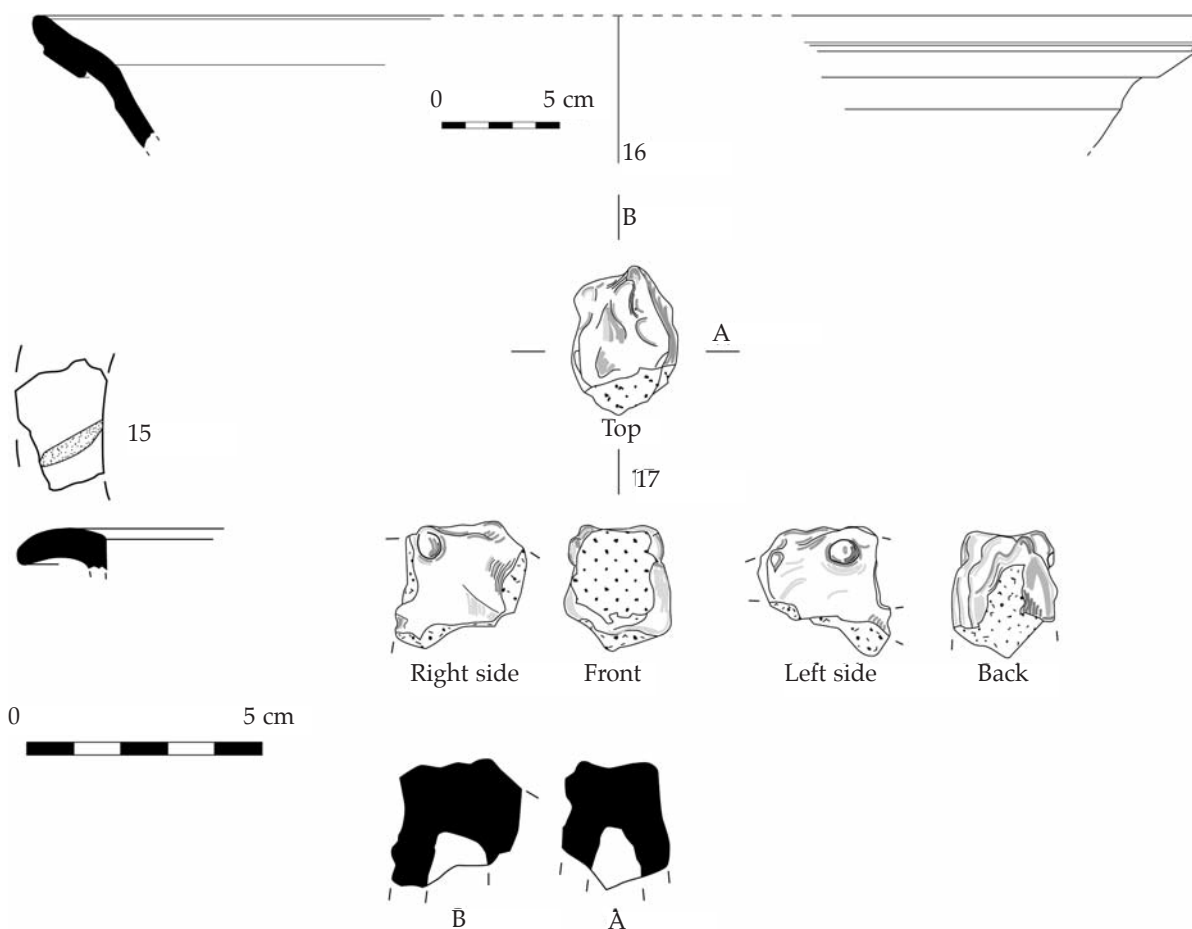


Fig. 22. Selected pottery of the Roman period, Cat. 15 North African dish; Cat. 16 local large platter or dish; Cat. 17 terracotta zoomorphic figurine (drawings: MSP, by RFD and MA, digitised by Joris Angenon).

On the basis of the rather steep inclination of the rim, the amphora fragment may perhaps be attributed to Ramón's type T-7.2.1.1, generally produced in the Tunisian Sahel, and apparently also in the western Tripolitania and western Sicily (Carthage is not mentioned among the possible production places).<sup>73</sup> The dating suggested by Ramón sets the type in the last third of the 3<sup>rd</sup> and the first decades of the 2<sup>nd</sup> centuries BCE. A more likely candidate, however, will be the first half of the 2<sup>nd</sup> century BCE amphorae of Ramón's type T-7.4.1.1, produced in the area of Tunisia, or possibly the Sahel and Tripolitania.<sup>74</sup> The clay of this type is attributed to Ramón's group 'Cartago-Túnez'. The sanctuary of Tas-Silg has yielded another rim fragment of this type of amphora.<sup>75</sup>

Cat. 14: MSP2008/1/E80/P1/1, 1 wall fragment of Attic (?) mould-made relief bowl (fig. 21).

Medium fired gray (10 YR 5/1) clay with isolated grey rounded particle, dark brown subangular particle and void (0.3 mm), traces of Black Glaze on both sides. Surface feels powdery, soft; probably secondarily burnt. The small fragment may belong to an Attic relief bowl,

but the burnt state prohibits the recognition of the typical Attic fabric.<sup>76</sup> Attic mould-made relief bowls were produced between ca 240 and 80 BCE, perhaps even till the late 1<sup>st</sup> century BCE. In any case, an attribution to one of the later Italian or Sicilian relief bowl production centres, active between ca 180 and 75 BCE, may be excluded on the basis of the presence of a true Black Glaze. It is difficult to establish the inclination of the present fragment; in fact, the decoration consisting of an egg-and-dart/ovolo above a double horizontal line and floral (?) viz. petal (?) decoration below would suggest a steeper inclination and a portion of the upper wall.<sup>77</sup> The excavations by Zammit at the Roman Domus of Rabat/Mdina in 1922 yielded fragments of no less than 20 relief bowls.<sup>78</sup>

#### Roman Period

Cat. 15: MSP2008/1/B156/P2/4, 1 rim fragment of a North African dish ARS 3B (fig. 22).

Hard fired light red (2.5 YR 6/6-8) clay with some small quartz and few blackish inclusions, traces of Red

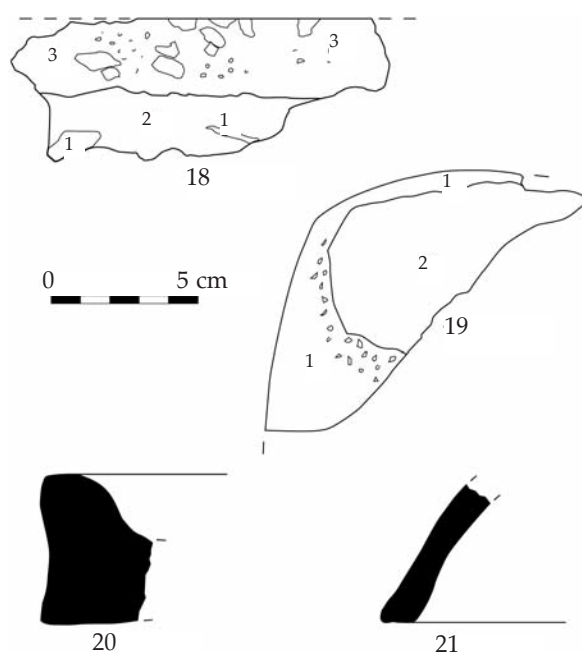


Fig. 23. Selected building material of the Hellenistic/Roman period, Cat. 18 section of terrazzo flooring; Cat. 19 section of terrazzo moulding of a bench (?); Cat. 20 local tegula; Cat. 21 local imbrex (drawings: MSP, by RFD, digitised by Joris Angenon).

Slip on surface. PH 0.8, Diam. rim ?

The rim shows a decoration in the barbotine technique. It belongs to a dish of J. Hayes' form ARS 3B, dated to ca 75-150 CE.<sup>79</sup> More recently, J. Lund, established a precision of the chronology of the form on the basis of coin-dated contexts in the Mediterranean: 60/80 to 160/180 CE.<sup>80</sup>

#### Hellenistic/Roman Period

Cat. 16: MSP2008/1/A57/P4/1, 1 rim fragment of a large platter or dish (fig. 22).

Hard fired light yellowish brown (2.5 Y 6/4) clay with many angular black particles (0.2-0.3 mm) and some quartz (0.3-0.4 mm), surface pale yellow (2.5 Y 7/4). The piece is covered with calcareous encrustations, mainly on the interior. PH 5.7, Diam. rim 51.5.

The date of these large platters or dishes remains to be ascertained, although a general date in the Hellenistic or Roman period, viz. the last two centuries BCE and the first three centuries of the CE, seems very well possible. In fact, in the discussion of the finds of Tract MSP08/B21 B. Bechtold tentatively attributes the rim of a similar vessel ('basin') to the Hellenistic period (Cat. 53, fig. 31). Similar rims seem to occur in archaeological contexts of the San Pawl Milqi site, dating to the 1<sup>st</sup> century BCE to the first half of the 2<sup>nd</sup> century CE.<sup>81</sup> A comparable rim in the category of 'cream-coated coarsewares' with a diameter of 38 cm has been published from the Hal Millieri site in south-eastern

Malta.<sup>82</sup> In view of the morphological similarity with ARS 99 bowl rims, it has been tentatively dated to the 6<sup>th</sup> century CE. These bowls generally are (much) smaller, though. 'Cream-coated coarsewares', most likely covered with scum or 'salt-slip', occur from the Phoenician/Punic period to Late Antiquity.

Cat. 17: MSP2008/1/A122/BS4/7, 1 head fragment of a terracotta zoomorphic figurine (fig. 22).

Hard fired yellowish red (5 YR 5/8) clay with lime, shell, quartz (?) and fine red inclusions, surface covered by pale yellow (2.5 Y 8/3) scum, but mostly worn. PH 2.7, W 2.3, PL 2.8.

The heavily damaged fragment of a mould-made terracotta seems to represent the head of a cow or a horse. The state of preservation prohibits any firm suggestions as to dating, although both the Phoenician/Punic and the Roman period have yielded examples of zoomorphic figurines on Malta.

Phoenician/Punic graves have yielded some examples of terracotta figurines.<sup>83</sup> To these, one may add a terracotta of a petaike, presumably found on Malta and now in the Allard Pierson Museum, Amsterdam, that in view of its state of preservation may have been found in a tomb as well.<sup>84</sup> The occurrence of terracotta figurines in sanctuary contexts is another, well-attested possibility. By way of example for the large and important sanctuary site of Tas-Silg one may quote Rossignani on the 1970 finds: 'molti frammenti di ex-voto fitili, dall'età arcaica a quella ellenistica, di produzione siciliota e magno-greca'.<sup>85</sup> As a functionally better comparison for the present find in tract A122, one should mention the figurine fragment and the human protomes found in a votive deposit in the rural villa of San Pawl Milqi, with material dated to the end of the 4<sup>th</sup> century BCE till the 1<sup>st</sup> century CE.<sup>86</sup>

Cat. 18: MSP2008/1/B99/P4/1, 1 fragment of terrazzo flooring with regularly spaced, inset white marble tessellae (fig. 23).

The flooring fragment consists of two layers: a 2.5 cm thick white to grey mortar layer (fig. 23, 18, no 2) with fragments of white limestone (fig. 23, 18, no 1), above which an equally thick top layer of reddish yellow (5 YR 6/8) crushed pottery fragments in a white mortar bedding (fig. 23, 18, no 3). The white marble tessellae are 1.2 x 1.2 cm and 1.2 x 1.5 cm. The surface is smoothened. PH 5.0, PL 13.0.

In Carthage, this type of flooring would constitute a typical example of the Punic pavements, the *pavimenta punica*.<sup>87</sup> Also the North African Punic town of Kerkouane, destroyed in 255/254 BCE, has yielded several examples of this type of flooring.<sup>88</sup> In Malta, however, one would hesitate to confine the occurrence of these pavements to the Punic period, since they might have been produced well into the Roman period. The San Pawl Milqi villa has yielded some fragments of similar pavements, albeit with irregularly spaced white marble tessellae.<sup>89</sup>

Cat. 19: MSP2008/1/B61/W1/2, 1 fragment of terrazzo moulding of a bench (?) (fig. 23).

The base material of the terrazzo moulding consists of fine (0.3-0.5 mm) crushed pottery fragments in a white to grey mortar bedding (fig. 23, 19, no 1). The pottery



fragments are larger towards the interior (3.0-4.0 mm), where also a large limestone of the bench (?) construction has been preserved (fig. 23, 19, no 2). The overall colour is pink (5 YR 7/3). The surface is smoothened; on the vertical part covered with a layer of white lime. PH 9.0, PW 10.8.

The well-preserved Punic site of Kerkouane has several examples of benches executed in rubble masonry and covered with *terrazzo*.<sup>90</sup> Alternatively, one should not exclude the possibility that the fragment belonged to the rim of a cistern or a basin.

*Cat. 20:* MSP2008/1/B21/BS7/28, 1 edge fragment of a *tegula* (fig. 23).

Hard fired light reddish brown (5 YR 6/4) clay with some angular dark grey stone particles (0.3-1.5 mm), few red particles (chamotte?; 0.2 mm) and isolated iron concretion-like inclusion (1.5 mm), surface very pale brown (10 YR 8/3) scum all over. PH 5.2, PW 3.9.

*Cat. 21:* MSP2008/1/B21/BS5/2, 1 rim fragment of an *imbrex* (fig. 23).

Hard fired red (2.5 YR 5/6) clay with some dark reddish particles (1.0-1.5 mm) and many very fine white foraminifera (less than 0.1 mm), surface pale yellow (2.5 Y 8/3) scum all over. Exterior surface smoothened, roughened on interior.

The *tegula* and *imbrex* fragments presented here belong to a fairly large group of tile fragments encountered in the survey. Some are clearly of local production, such as *Cat. 20-21*, but others seem to have been imported from different production places. They may well date to the Roman period, if not to the Late Antique period; an earlier date is probably to be excluded since roof tiles from the Phoenician/Punic period are extremely uncommon.<sup>91</sup> Other tile fragments in the survey material have been attributed to the Medieval period (NC).

*Cat. 22:* MSP2008/1/B21/BS11/35, 1 edge fragment of a brick (fig. 24).

Hard fired red (2.5 YR 5/6) clay with wide grey core, containing many angular to sub-angular quartz and black particles (0.2-0.5 mm) and some limestone particles (0.2-0.5 mm), surface light gray (2.5 Y 7/2) scum all over. Surface partly covered with grey mortar. H 7.4, PW 7.5, PL 9.4.

The brick seems to be of local manufacture. The occurrence of black particles in some of the local clays of the Maltese islands can be explained by the occurrence of Glauconite in the so-called Greensand formations.<sup>92</sup> Fragments of similar large bricks can be seen lying around in the San Pawl Milqi villa.<sup>93</sup> They seem to be of similar fabric.

*Cat. 23:* MSP2008/1/B21/BS11/37, 1 edge fragment of a terracotta doweled floor tile (fig. 24).

Hard fired reddish brown (5 YR 5/3) clay with some dark reddish brown particles (0.5-1.0 mm), some limestone particles (0.2-0.5 mm) and some sub-angular quartz (0.2-0.5 mm), surface light gray (2.5 Y 7/2) scum all over. Th 6.7, PL 8.2, PW 11.0.

The tile shows clear signs of a broken off dowel at the preserved side. This feature is encountered several times in the North African, Carthaginian Punic world in terracotta floors of the 3<sup>rd</sup> century BCE.<sup>94</sup> In these

cases the terracotta floor is mostly hexagonal and moreover of comparable thickness (5-8 cm).<sup>95</sup> It is exactly the larger dimensions that sets the Punic terracotta floor tiles apart from the Roman ones as A. Mezzolani already suggested for the lozenge-shaped ones (see below).<sup>96</sup>

*Cat. 24:* MSP2008/1/A148/P10/19, 1 triangular terracotta floor tile (fig. 24).

Hard fired reddish yellow (5 YR 6/6) clay, probably with darker or grey core (as suggested by the chipped edge), containing some quartz and foraminifera (0.2-0.3 mm) and some limestone particles (0.3-0.5 mm), surface reddish yellow (5 YR 6/6). Th 1.5, W sides 5.

*Cat. 25:* MSP2008/1/B21/P6/10, 1 fragment of rectangular terracotta floor tile (fig. 24).

Hard fired light red (2.5 YR 6/6) clay with some quartz and limestone particles (0.1-0.2 mm), surface reddish yellow (5 YR 6/6). Mortar traces on one of the sides. Th 1.5, PW 3.3, PL 4.4.

Although the two tiles *Cat. 24-25* were found in different zones of the survey area, the remarkable fact that they share the same thickness may suggest that they were produced in the same period, if not in the same workshop.

*Cat. 26:* MSP2008/1/B35/P1/5, 1 fragment of lozenge-shaped terracotta floor tile (fig. 24).

Hard fired light red (2.5 YR 6/6) clay with wide grey core, containing many foraminifera (0.1-0.2 mm), some dark brown particles (0.2 mm), few white particles (0.2 mm) and some quartz (0.2-0.3 mm), surface light yellowish brown (2.5 Y 6/4). Over the centre runs a line in relief from the mould, in which the tile was formed. Th 2.2, PW 8.0, PL 7.3 (original dimensions of the piece: 2.2 x 15 x 8.5).

*Cat. 27:* MSP2008/1/B37/C1/1, 1 fragment of hexagonal terracotta floor tile (fig. 24).

Hard fired pale brown (10 YR 6/3) clay with many black particles (0.2-0.3 mm) and few translucent quartz (0.2-0.4 mm), surface light brownish gray (10 YR 6/2). Th 2.2, W 7.5, PL 6.3 (original dimensions of the piece: 2.2 x 7.5 x 9.0).

The fact that *Cat. 26-27* share the same thickness and were found in the same zone would suggest that they belonged to the same floor system. The same type of flooring, especially with the lozenge-shaped tiles, has been found elsewhere on Malta, in the San Pawl Milqi villa and in the Roman Domus at Rabat/Mdina.<sup>97</sup> In the latter case we are dealing with the central piece of Room B offering an 'illusionistic design consisting of a pattern of cascading cubes in perspective formed by lozenge-shaped tiles of three different colours (*opus scutulatum*)'. The series of floors and mosaics in the Domus are dated between the last quarter of the 2<sup>nd</sup> century till the middle of the 1<sup>st</sup> century BCE. The tile floor in the San Pawl Milqi villa is less intricate. The lozenge-shaped tiles form a sort of repetitive fishbone pattern in a small annex.<sup>98</sup>

The Punic world has also given evidence of lozenge-shaped terracotta floor tiles, both in Carthage and in Kerkouane, although these seem to be of larger dimensions (e.g. 22/23 x 12 x 5 cm).<sup>99</sup>

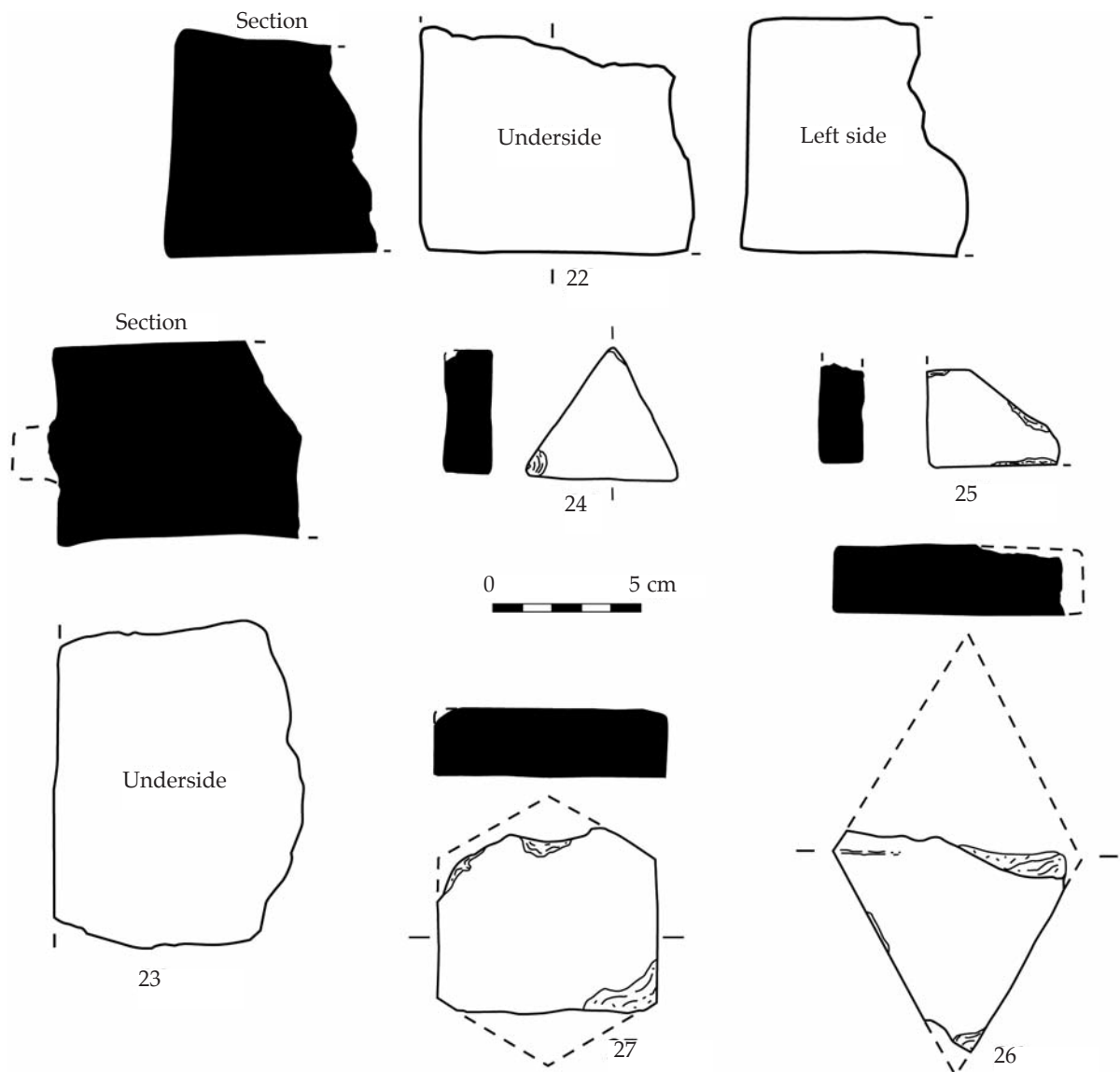


Fig. 24. Selected building material of the Hellenistic/Roman period, Cat. 22 local brick; Cat. 23 terracotta doweled floor tile; Cat. 24-27 local terracotta floor tiles (drawings: MSP, by RFD, digitised by Joris Angenon).

#### Late Antiquity

Cat. 28: MSP2008/1/B152/P7/1, 1 rim fragment of large North African dish/bowl or plate ARS 104 or 105 (fig. 25).

Hard fired red (2.5 YR 5/8) clay with many rounded quartz (0.1-0.2 mm) and few yellowish lime particles (0.3 mm), surface light red (2.5 YR 6/6). PH 1.9, Diam. rim 26. The rim belongs to either a dish/bowl of Hayes' form ARS 104, dated to ca 530-625+ CE or form ARS 105, dated to ca 580/600-660+ CE.<sup>100</sup> More recently, Lund established a precision of the chronology of the two forms and their several subtypes/variants on the basis of coin-dated contexts in the Mediterranean: 430/440

to 610/620 CE for ARS 104 and 520/540 to 660/680 CE for ARS 105.<sup>101</sup> Especially a rim of ARS 105 (variant 4) found in the Segermes Valley Survey in northern Tunisia is close in shape.<sup>102</sup> In their discussion of Byzantine Malta, B. Bruno and N. Cutajar consider the ARS 105 as a determining element of the '*facies ceramica di Malta bizantina*'.<sup>103</sup> It occurs in San Pawl Milqi ('soprattutto H. 105'), in the sondages of the Palazzo Xara in Mdina, on Gozo in Rabat/Victoria, and in the Tar-Raġhad tomb in Mġarr (Malta).<sup>104</sup> ARS 104 is attested in tombs discovered at Tal-Barrani (Żejtun) in 1993 and in the Tar-Raġhad tomb as well.<sup>105</sup> More or less comparable rims have been found in the earlier excavations at the sanctuary site of Tas-Silġ.<sup>106</sup>

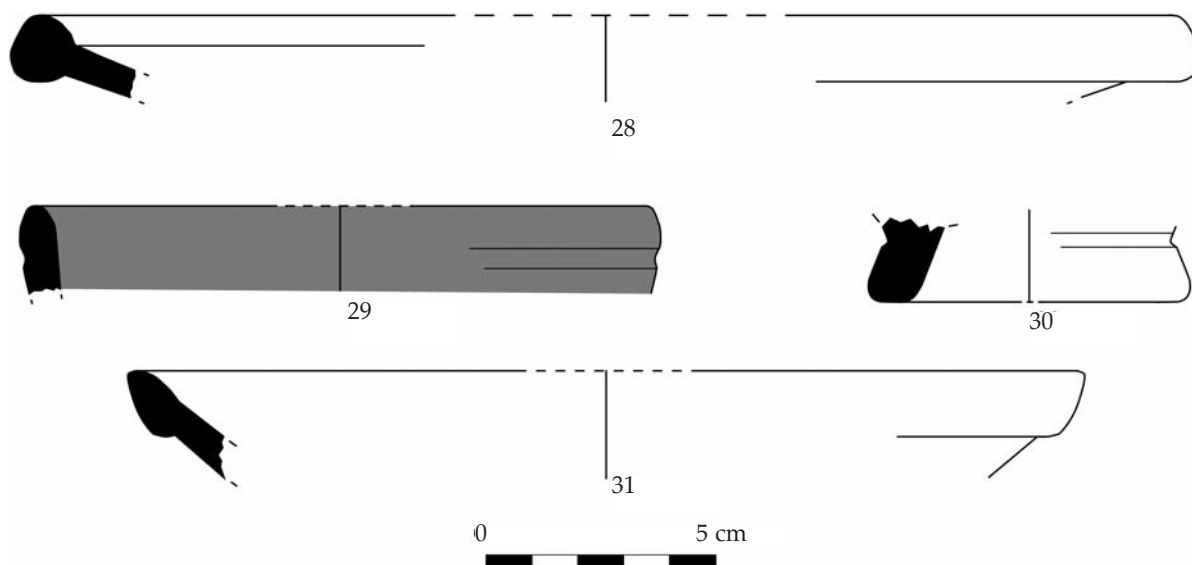


Fig. 25. Selected pottery of the Late Antique, Early Medieval and High Medieval periods, Cat. 28 North African dish/bowl or plate; Cat. 29 North African (?) cooking pot; Cat. 30 North African (?) bowl; Cat. 31 local (?) open vessel/dish (drawings: MSP, by RFD, digitised by Joris Angenon).

#### Early Medieval Period

Cat. 29: MSP2008/1/A13/P1/1, 1 rim fragment of North African (?) cooking pot (Fig. 25).

Medium fired red (10 R 5/6) clay with many rounded quartz (0.1-0.2 mm), surface weak red (10 R 4/3 – 5/3) matt glaze all over, slightly crackle. PH 1.9, Diam. rim 14 (?).

The rim may be dated to the 9<sup>th</sup> or 10<sup>th</sup> century CE on the basis of unpublished comparisons from excavations elsewhere on Malta.

#### High Medieval Period

Cat. 30: MSP2008/1/A1/P2/2, 1 base fragment of a North African (?) bowl (fig. 25).

Hard fired light red (2.5 YR 6/6) clay with some quartz, greyish particles and foraminifera (0.1 mm), surface covered with yellowish layer all over, green glaze preserved in ridge and on outside of ring base. PH 1.8, Diam. base 7.

It may be dated to the 11<sup>th</sup>-13<sup>th</sup> century CE on the basis of unpublished comparisons from excavations elsewhere on Malta.

Cat. 31: MSP2008/1/A8/P3/2, 1 rim fragment of an open vessel/dish (fig. 25).

Hard fired very pale brown (10 YR 8/4) clay with isolated manganese particle (0.2 mm) and some quartz (0.1-0.2 mm), surface covered with brownish yellow (10 YR 6/6) layer all over, green glaze preserved in ridges. PH 2.5, Diam. rim 20.

The clay properties would leave open the possibility of a North African production, but a local production seems not to be excluded either. It may be dated to the 11<sup>th</sup>-

13<sup>th</sup> century CE on the basis of unpublished comparisons from excavations elsewhere on Malta.

#### Early Modern Period

Cat. 32: MSP2008/1/A2/P3/1, 1 rim fragment of a local bowl (fig. 26).

Hard fired yellowish red (5 YR 5/6) clay with many greyish white limestone (?) particles, foraminifera and quartz (0.2-0.4 mm), as well as few manganese (?) particles (0.3 mm), surface pink (7.5 YR 7/4). PH 3.6, Diam. rim 22.

The clay characteristics have been termed 'white speckled' in the finds laboratory and seem to be fairly typical for local productions of the Early Modern period. The bowl may be dated to the 16<sup>th</sup>-17<sup>th</sup> century CE on the basis of unpublished comparisons from excavations elsewhere on Malta.

The following five tobacco pipe fragments (Cat. 33-37, fig. 26), are in the chibouk style, known in Maltese as *pipa tal-qasba* or reed pipe. The terminology follows that established by R. Robinson.<sup>107</sup> Tobacco pipes were introduced in the Mediterranean around 1600, developing over the next two centuries. Early pipes were fired grey and were superseded by browns and reds during the 18<sup>th</sup> century CE, increasing in size with the availability of tobacco.<sup>108</sup> It would seem that reed pipes were not made in Malta on a commercial basis as more recent oral information suggests.<sup>109</sup> Mid-17<sup>th</sup> century CE quarantine registers show that over three quarters of the trade in tobacco products originated in Greece and the Aegean.<sup>110</sup> Arrival Booklets for 1743-1747 in the National Archives of Malta Libretti confirm this pattern. In the 19<sup>th</sup> century there was still a lively trade with Constanti-



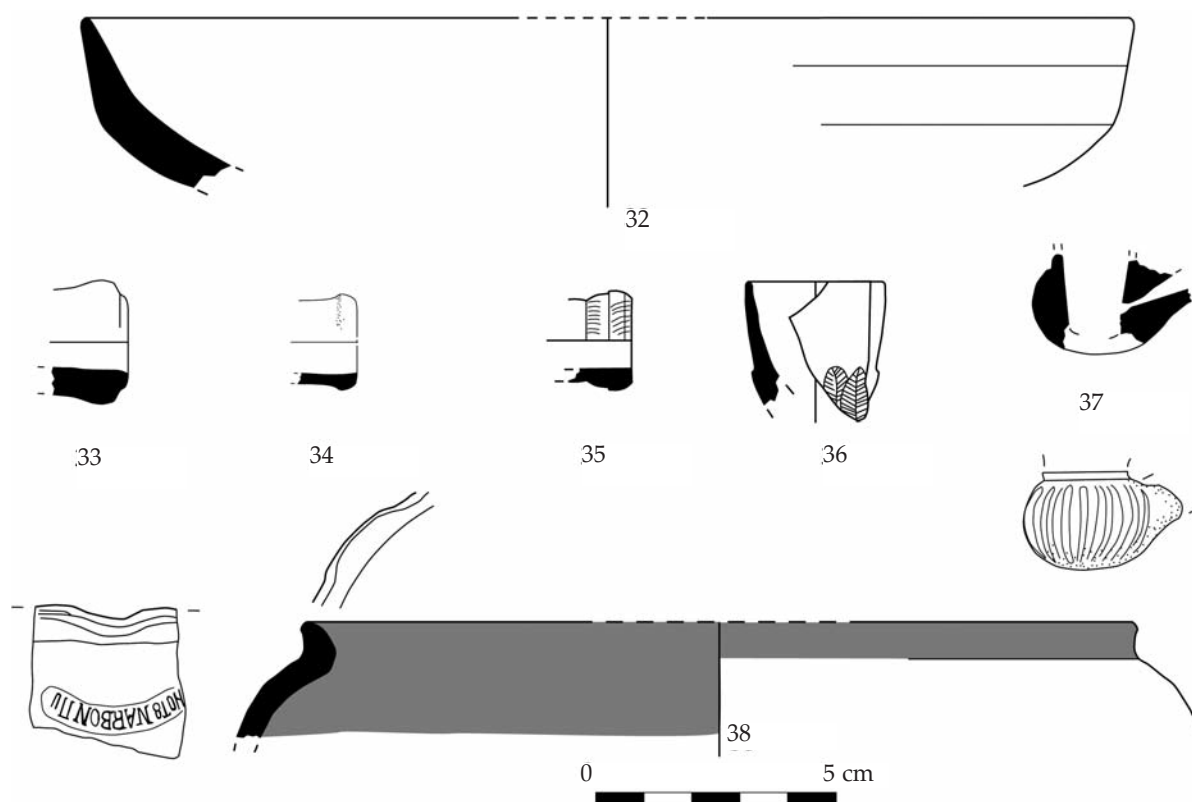


Fig. 26. Selected finds of the Early Modern period, Cat. 32 local bowl; Cat. 33-37 imported mould-made pipatal-qasba or reed tobacco pipes; Cat. 38 Narbonne spouted cooking pot (drawings: MSP, by RFD, digitised by Joris Angenon).

nople and Smyrna, attested in Lloyd Maltese Shipping Registers in the National Library. Heritage Malta and the Superintendence of Cultural Heritage already possess 349 chibouk style pipes, mostly in reserve collections. Many were from a wet environment.<sup>111</sup> The present collection from the survey may add significantly to our knowledge of this popular addiction.

*Cat. 33:* MSP2008/1/A119/P6/1, 1 end of shank fragment of mould-made tobacco pipe (fig. 26). Hard fired very pure light brown clay, discoloured grey towards the edges, with some very fine white rounded particles (less than 0.1 mm) and isolated sub-angular white particle (0.2 mm), surface gray (10 YR 6/1). PL 1.6, max. Diam. 2.6. Plain swelling with an incised groove under the terminal ring. Early Modern import.

*Cat. 34:* MSP2008/1/A41/P6/9, 1 end of shank fragment of mould-made tobacco pipe (fig. 26). Hard fired very pure red (10 R 5/6) clay with few very fine mica, surface light red (2.5 YR 6/4) slip or wash. PL 2.4, max. Diam. 2.0. Slightly swollen termination. Early Modern import.

*Cat. 35:* MSP2008/1/D44/P4/1, 1 end of shank fragment of mould-made tobacco pipe (fig. 26).

Hard fired very pure red (2.5 YR 5/6) clay with isolated brown particle (0.1 mm), surface light red (2.5 YR 6/8). PL 1.3, max. Diam. 2.0. At first sight, the clay looks very much like that of ARS.

The terminal ring has incised oblique decoration consisting of indents of rouletting in two rows, under which is a twist of rope work, both popular motifs. Early Modern import.

*Cat. 36:* MSP2008/1/F158/W110/1, 1 bowl fragment with plain burnished rim of mould-made tobacco pipe (fig. 26).

Hard fired very pure light red (2.5 YR 6/8) clay with some very fine mica in the smoothened light red (2.5 YR 6/6) surface. PH 2.6, Diam. rim 3.0. At first sight, the clay looks very much like that of ARS.

Decoration in relief consisting of two overlapping leaves. A similar motif was used to decorate a light brown bowl recovered from the quarantine harbour of Valletta as well as on an unpublished bowl and shank fragment found on the roof of a farmhouse at Is-Sruġ (Gozo).<sup>112</sup> The latter lichen covered object had been collected with other broken domestic pottery to be made into *deffun* (see above). Early Modern import.

*Cat. 37:* MSP2008/1/A57/P4/3, 1 bowl fragment of mould-made tobacco pipe (*fig. 26*).

Hard fired very pure reddish yellow (7.5 YR 6/6) clay with few red inclusions (0.1 mm), surface reddish yellow (7.5 YR 7/6). PH 3.1, Diam bowl 2.7, PL 3.3. Surface very much abraded; most of the rim, shank and base are missing.

Gadrooned decoration under a raised horizontal band. This style of pipe is well illustrated in contemporary paintings. One may, for example, mention Louis Ducros' watercolour of 'A group of young Gozitans dancing' (1778),<sup>113</sup> Charles Brockdorff's 'Maltese pothouse' (1820),<sup>114</sup> George Badger's 'Country man' (1838),<sup>115</sup> and Michelle Bellanti's 'The New Aqueduct' (1843).<sup>116</sup> Archaeologically, the style of decoration is found in many examples from Malta.<sup>117</sup> Early Modern import.

*Cat. 38:* MSP2008/1/B82/P3/1, 1 rim fragment of Narbonne spouted cooking pot (*fig. 26*).

Hard fired reddish brown (5 YR 5/4) clay with some sub-angular quartz, few white particles (0.2-0.3 mm) and some voids (0.2 mm), surface light reddish brown (5 YR 6/4) with red glaze (2.5 YR 4/8) on inside and upper part rim. PH 2.5, Diam. rim 17.0. Inversely stamped pottery mark below the spout, which may either read 'NOT8NARBONNE' or 'NO18NARBONNE'.

RFD, NC, CV, NCV, JW

#### SELECTED PHOENICIAN/PUNIC AND ROMAN POTTERY FROM THREE SURVEY TRACTS OF THE GEBEL GHAWŻARA SITE

In the frame of the present preliminary report the ceramic study has focused upon the Phoenician/Punic and Roman finds of three specific tracts, belonging to the larger rural site of Ġebel Ghawżara: MSP08/B16, MSP08/B21, and MSP08/B74 (*fig. 5*). The former two are situated in the area occupied by the agricultural installations of a Phoenician/Punic, Hellenistic and Roman to Late Antique farmstead/villa. The latter tract belongs to the garigue area just above the site itself and is situated due north of two graves dug into the bed-rock (one of which illustrated in *fig. 16*).

#### TRACT MSP08/B16

Tract B16 has yielded 1125 finds, of which 31 are diagnostic fragments of the Phoenician/Punic and Roman periods. These consist mainly of Plain Wares (ca 45%), generally of local fabric, followed by local Cooking Wares (ca 19%) and local Red Slip Wares (ca 10%). Here, a representative selection of five fragments is published.

On the basis of the finds from this tract, the Middle Imperial period would constitute the latest occupation phase of the site during antiquity.<sup>118</sup> It is documented by two poorly preserved fragments

of plates of African Red Slip Ware (ARS) of Hayes' types 16-18 (ca second half of the 2<sup>nd</sup>-first half of the 3<sup>rd</sup> century CE)<sup>119</sup> and Hayes' types 2-18 (second half of the 1<sup>st</sup>-2<sup>nd</sup> century CE).<sup>120</sup> The fragments selected for the catalogue below allow distinguishing an Early Imperial occupation phase (*Cat. 43*), from a probably earlier, Late Hellenistic phase. To this latter phase one might attribute the base fragment *Cat. 42*, in addition to two small rims of plates with central well (such as *Cat. 53*) and two basins (such as *Cat. 55*).

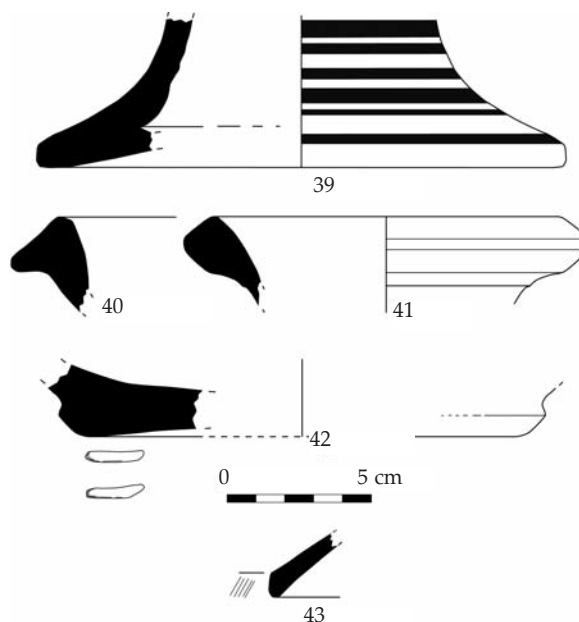
The painted base *Cat. 39* and the possibly North Lucanian transport amphora *Cat. 41* may surely belong to a 4<sup>th</sup>-century BCE Punic phase of the site. The basin of Vegas' F.47.3 *Cat. 40* is likely to date back to a still earlier Phoenician/Punic phase.

#### Phoenician/Punic Period

##### Local Punic Painted Ware

*Cat. 39:* MSP2008/1/B16/General/1, 1 base fragment of a table amphora (*fig. 27*).

Hard fired, reddish yellow clay (5 YR 7/6), with many whitish microfossils (0.1-0.5 mm) and single yellowish bits (0.6 mm); light reddish brown (5 YR 6/4) painted horizontal lines externally on pale yellow slip (2 YR 8/4),



*Fig. 27. Selected pottery from tract MSP08/B16: Phoenician/Punic period, Cat. 39 local painted table amphora; Cat. 40 local basin; Cat. 41 North Lucanian (?) transport amphora; Hellenistic period, Cat. 42 local basin; Roman period, Cat. 43 African Blacktop Ware lid (drawings: MSP, by BB, digitised by Joris Angenon).*

colour of internal surface reddish yellow (5 YR 7/6); traces of mortar on surface. PH 5.2, Diam. base 17.8. *Cat. 39* matches Sagona's form III-IV:4a-b of the urns, characteristic of her later phase III-early phase IV, that is to say 410-300 BCE.<sup>121</sup> According to E. Groenewoud and P. Vidal González this 'two-handled jar' might be considered a '(...) typical Central Mediterranean shape, possibly of Maltese origin'.<sup>122</sup> Its distribution along the geographical axes Malta - Sicily - Balearic islands has been discussed by Ciasca.<sup>123</sup> The very recent study of the Maltese pottery yielded by the German-Italian mission at Pantelleria has shown that urns of Sagona's type III-IV:4a-b represent by far the most common shape within the finds from both the acropolis excavations and the survey.<sup>124</sup>

#### Local Plain Ware

*Cat. 40:* MSP2008/1/B16/BS7/1, 1 rim fragment of a basin (*fig. 27*).

Hard fired, dark reddish grey clay (5 YR 4/2), with many whitish microfossils (0.1 mm), some grey stony bits (0.5-1.5 mm) and rare red inclusions (0.3 mm); on surface pink-reddish yellow slip (5 YR 7/6 - 7/4). PH 3.3, Diam. rim ?

*Cat. 40* is likely to belong to a basin as M. Vegas' Form 47.3, documented in the settlement of Carthage from the second half of the 8<sup>th</sup> to the first half of the 5<sup>th</sup> century BCE.<sup>125</sup>

#### Transport Amphora North Lucanian fabric?

*Cat. 41:* MSP2008/1/B16/P7/2, 1 rim fragment of an amphora of Vandermersch's type III (*fig. 27*).

Hard fired, coarse, clay, reddish yellow on exterior (5 YR 6/6), pink on interior (7.5 YR 7/4), with quite a lot of roundish violet, iron grits (1.0 mm), frequent angular blackish volcanic inclusions (0.1-0.3 mm) and quartz (0.5 mm) and some microfossils (0.3 mm); pink slip (5 Y 8/3) inside and outside. PH 3.2, Diam. rim 12.

The type may be attributed to amphorae of type MGS III by Ch. Vandermersch.<sup>126</sup> The oldest specimens come from late 5<sup>th</sup>- and first half of the 4<sup>th</sup>-century BCE contexts, but the bulk of the vessels of this shape was almost certainly produced after the middle of the 4<sup>th</sup> century BCE.<sup>127</sup> The best morphological comparisons for *Cat. 41* of presumably Lucanian fabric come from Sicily. On Lipari the type '*con orlo ad echino*' is dated to the second half of the 4<sup>th</sup> and the beginning of the 3<sup>rd</sup> centuries BCE.<sup>128</sup> In Entella, MGS amphorae similar to *Cat. 41* have been found in the '*edificio granario*', in a context dated to the last quarter/end of the 4<sup>th</sup> century BCE.<sup>129</sup> One further parallel has been found on a rural site close to Camerina ('*fattoria delle api*').<sup>130</sup>

A sample of the present fragment appears to be similar to an amphora fabric attributed to Paestum,<sup>131</sup> but the presence of clearly volcanic inclusions in the fabric of *Cat. 41* distinguish it from the production of Poseidonia. The documentation of a vessel possibly from the North Lucanian area on Malta would be highly interesting, since transport amphorae from Northern Lucania (Velia and Paestum) are apparently very well documented on other 4<sup>th</sup>-century BCE Punic sites of the cen-

tral Mediterranean area (Jerba, Carthage, Pantelleria, Selinunte).<sup>132</sup>

One may conclude that the Phoenician/Punic and Roman finds from Tract B16 date to the 4<sup>th</sup> century BCE till at least the 2<sup>nd</sup> century or first half of the 3<sup>rd</sup> century CE.

#### Hellenistic Period (Late Hellenistic: 2<sup>nd</sup>-1<sup>st</sup> Century BCE)

*Cat. 42:* MSP2008/1/B16/BS13/7, 1 base fragment of a basin (*fig. 27*).

Hard fired, gritty clay, light red at core (2.5 YR 6/8), weak red on surface (2.5 YR 5/2), with many whitish microfossils (0.5 mm) and rare black grits (0.4-0.5 mm); traces of pink slip (5 YR 8/3) on surface; two radial lines, incised before firing, on underside of the resting surface. PH 2.5, Diam. base 14-15.

#### Roman Period (Early Imperial: late 1<sup>st</sup> Century BCE-1<sup>st</sup> Century CE)

##### African Blacktop Ware

*Cat. 43:* MSP2008/1/B16/BS7/2, 1 rim fragment of a lid of Fulford's type 10 (*fig. 27*).

Hard fired, fine, light red clay (2.5 YR 6/8), reddish yellow (5 YR 7/6) on surfaces, rim externally blackened, with tiny bits of quartz. PH 2.3, Diam. rim ?

*Cat. 43* may be compared to an African Black Top lid of Fulford's type 10, first documented in the late 1<sup>st</sup> century BCE, but occurring more frequently in the 1<sup>st</sup> century CE down to the 4<sup>th</sup> century CE.<sup>133</sup>

#### TRACT MSP08/B21

Tract MSP08/B21 has yielded 627 pottery fragments, of which 111 diagnostic ones belonging to the Punic and Roman periods have been studied by the present author. The quantitative distribution of the single ceramic classes within this selection of diagnostic fragments shows that Plain Wares, mainly of supposed local fabric, prevail with nearly 58%, followed by transport amphorae (10%), which are almost exclusively of imported fabrics, and local Handmade Wares (10%), generally red slipped (*fig. 28*).<sup>134</sup>

The sixteen items included in the catalogue below have been selected with the intention of illustrating the different occupation phases of the site in antiquity. There is scarce evidence for occupation of the site during the Middle and Late Imperial period: a presumably Tunisian amphora (*Cat. 57*), one vessel of the class 'Forlimpopoli' (*Cat. 58*) and a possibly local red slipped bowl (*Cat. 59*). Even less strong is the evidence for the Early Imperial phase, represented by a single Italian Terra Sigillata fragment (*Cat. 55*), in addition to a Campanian Dressel 2-4 amphora (*Cat. 56*).



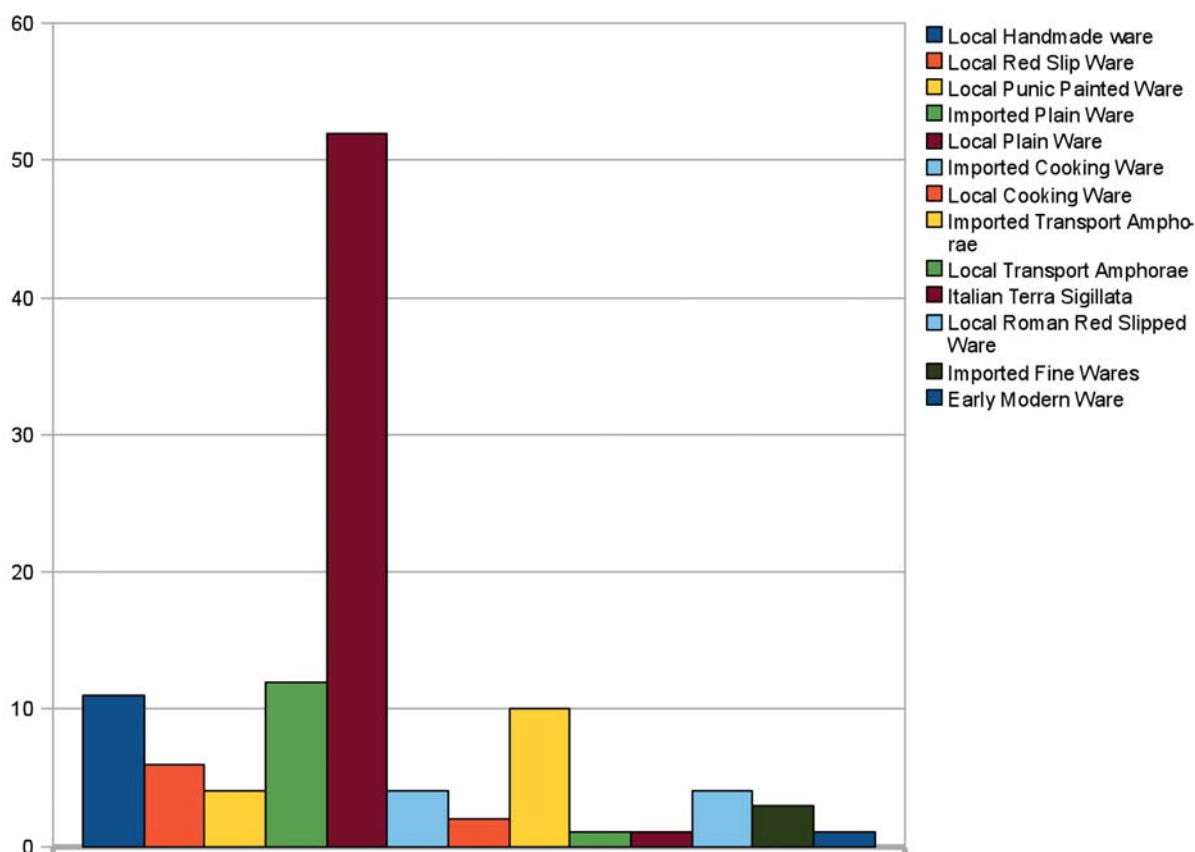


Fig. 28. Quantitative distribution of the ceramic classes within the material collected on tract MSP08/ B21 (N=111 diagnostic fragments considered; prepared by BB).

Best documented, however, is the phase of the Late Hellenistic period (2<sup>nd</sup>-1<sup>st</sup> century BCE), with characteristic associations between transport amphorae imported from the wine-producing regions of Campania (Cat. 47) and the Adriatic area (Cat. 48), a fish-sauce amphora from Baetica (Cat. 50), together with a local amphora of class 'Malta 1' (Cat. 49) and some highly diagnostic Plain Wares shapes (Cat. 51-54).

There is also some evidence for occupation during the Phoenician/Punic period, which is indicated mainly by a few fragments of local Punic Painted Ware (Cat. 45) and an imported table amphora (Cat. 46), in addition to six items of Red Slip Ware of the Phoenician/Punic period (Cat. 44).

In conclusion, Tract B21 shows an occupation, apparently without any interruption, from a still undetermined moment during the Phoenician/Punic period (second half of the 4<sup>th</sup> century BCE at the latest) down to the 2<sup>nd</sup> or 3<sup>rd</sup> century CE.

*Phoenician/Punic Period (earlier than the 2<sup>nd</sup> Century BCE)*

Local Punic (?) Red Slip Ware

Cat. 44: MSP2008/1/B21/BS11/49, 1 rim fragment of a bowl (fig. 29).

Hard fired, reddish yellow clay (5 YR 6/6), with some white grits (0.5 mm), some greyish, angular shaped, stony particles (0.8 mm) and some blackish-reddish inclusions (0.5 mm); surfaces smoothened and covered by a reddish yellow slip (5 YR 7/8). PH 2.6, Diam. rim 22. The presence of a few fragments of apparently local Red Slip Ware on Tract B21 hints at the possible occupation of the site already during the Phoenician/Punic (Early Punic) period, a fact also corroborated by the finds on other parts of the wider Gebel Ghawzara site. Cat. 44 seems to be close to Peserico's type CsC1, particularly sub-type III, which at Carthage in particular is attested in deposits dated to the advanced 8<sup>th</sup>-early 7<sup>th</sup> century BCE.<sup>135</sup>

Local Punic Painted Ware

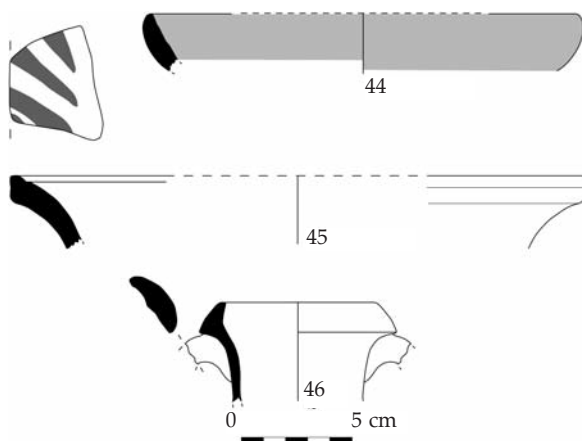


Fig. 29. Selected pottery of the Phoenician/Punic period from tract MSP08/B21: Cat. 44 local Red Slip bowl; Cat. 45 local Painted Ware basin; Cat. 46 Sicilian (?) table amphora (drawings: MSP, by BB, digitised by Joris Angenon).

Cat. 45: MSP2008/1/B21/BS12/12, 1 rim fragment of a basin (fig. 29).

Hard fired clay, very pale brown on exterior and interior (7.5 YR 5/2), pale brown at core (10 YR 6/3), with some brown, roundish particles (0.3 mm) and some yellow inclusions (0.5-1 mm); thick, high quality, pale scum (10 YR 8/3) on surfaces, painted with red (10 R 5/6) leaves on the interior. PH 3.3, Diam. rim range 26-28. While the particular profile of Cat. 45 remains - so far - without comparisons, the presence of a thick, high quality pale slip on the surfaces of the item hints at a dating to within the 4<sup>th</sup>-3<sup>rd</sup> century BCE, when the local pottery productions appear to be frequently characterised by this particular surface treatment.<sup>136</sup> More or less comparable decorations have been published from the San Pawl Milqi villa.<sup>137</sup> The rare presence of reddish painted leaves or flowers on Maltese pottery dating to this period has already been noted by Ciasca.<sup>138</sup>

#### Imported Plain Ware (Sicily?)

Cat. 46: MSP2008/1/B21/BS11/43, 1 fragment of rim and handle attachment of a table amphora (fig. 29).

Hard fired, very fine, light reddish brown clay (5 YR 6/4) with some tiny whitish and greyish bits; on surface traces of a pink slip (5 YR 8/3)? PH 4.5, Diam. rim 6.8. Cat. 46 is likely to belong to a table amphora with triangular rim, characterised by an internally concave profile and cylindrical neck. This type, often with painted decoration, appears to be well documented in northern Tunisia (Cap Bon, Kerkouane, Carthage), western Sicily (Segesta, Entella, Lilybaeum) and Punic Sardinia. The stratified evidence derived from recent excavations suggests an occurrence mainly covering the second half of the 4<sup>th</sup> and the first half of the 3<sup>rd</sup> centuries BCE, in Sardinia possibly during the whole 3<sup>rd</sup> century BCE.<sup>139</sup>

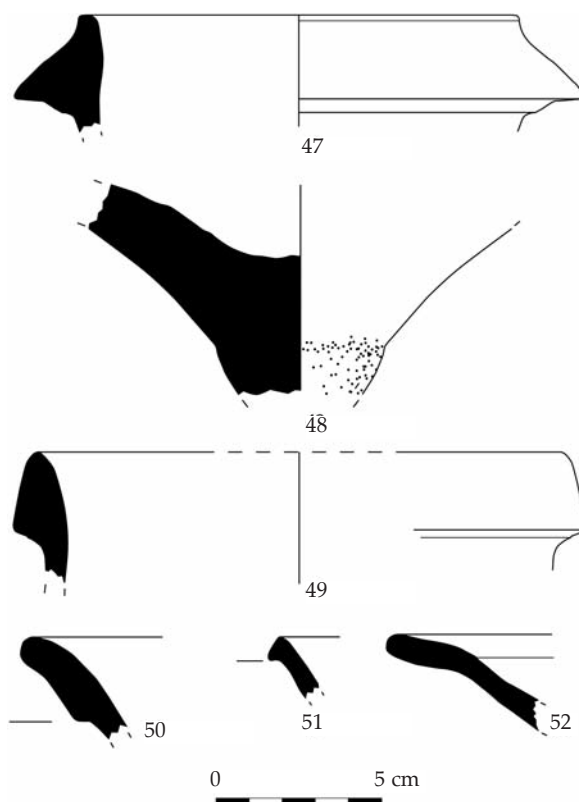


Fig. 30. Selected pottery of the Hellenistic period from tract MSP08/B21: Cat. 47 Campanian Graeco-Italic transport amphora; Cat. 48 Adriatic transport amphora; Cat. 49 local transport amphora; Cat. 50 southern Iberian transport amphora; Cat. 51 local plate or bowl; Cat. 52 local plate (drawings: MSP, by BB, digitised by Joris Angenon).

#### Hellenistic Period (Late Hellenistic: 2<sup>nd</sup>-1<sup>st</sup> Century BCE)

##### Transport Amphorae

##### Campanian Fabric

Cat. 47: MSP2008/1/B21/BS11/1, 1 rim fragment of Graeco-Italic amphora of Vandermersch's MGS VI (fig. 30).

Hard fired, reddish yellow clay (5 YR 6/6), with rare bits of quartz (0.1 mm) and whitish particles (0.3 mm, limestone?), abundant reddish inclusions (0.5 mm) and a good number of black (volcanic) particles (0.3-0.6 mm); on internal and external surface very pale brown slip (10 YR 8/3). PH 3.5, Diam. rim 13.2.

A sample taken from Cat. 47 resembles H. Liko's 'Scher-bentyp' AH 13 of the Hellenistic amphorae from Velia, which is attributed to the Gulf of Naples.<sup>140</sup>

From a morphological point of view, the present item corresponds to an advanced, late 3<sup>rd</sup>-early 2<sup>nd</sup>-century BCE evolution stage of the series of the Graeco-Italic amphorae.<sup>141</sup> Good typological comparisons can be found among the transport vessels forming the cargo of the Ses Lloses-Lazareto wreck (Menorca), dated to within the late 3<sup>rd</sup> century BCE,<sup>142</sup> and from a deposit excavated at Ampurias of the first quarter of the 2<sup>nd</sup> century BCE.<sup>143</sup> Furthermore, layer IIIA-B of the excavations in the settlement of Tindari (northern Sicily), dated to around 200 BCE, has yielded more comparisons.<sup>144</sup> Amphorae of this type and similar to *Cat. 47* have been published from Malta before, in archaeological deposits of the 'area nord' of the Tas-Silġ sanctuary, dated to within the Late Republican period.<sup>145</sup> The present survey has yielded a slightly earlier Graeco-Italic amphora of Vanderersch's type MGS V/VI that may have been produced on eastern Sicily (MSP2008/1/C36/P1/3). *Adriatic Fabric*

*Cat. 48:* MSP2008/1/B21/F1/1, 1 base fragment of an amphora type Lamboglia 2/Dressel 6A (*fig. 30*). Hard fired, quite fine, pink clay (7.5 YR 7/4), with some greyish bits of quartz (0.3 mm), some red particles (0.3-0.5 mm) and tiny bits of golden mica. Pinkish slip (7.5 YR 8/4) on inside and outside. PH 5.7, max. Diam. base 11.5. The poor preservation of *Cat. 48* does not allow a precise attribution to one of the two consecutive Adriatic forms. The Adriatic series have been produced from the second half of the 2<sup>nd</sup> century BCE up to the middle of the 1<sup>st</sup> century CE,<sup>146</sup> and appear to be well attested in both the sanctuary of Tas-Silġ and the villa of San Pawl Milqi.<sup>147</sup> Also the survey has yielded fragments of these amphorae in some numbers.

#### Maltese Fabric

*Cat. 49:* MSP2008/1/B21/W2/2, 1 rim fragment of an amphora of class 'Malta 1' (*fig. 30*). Hard fired, reddish yellow clay (5 YR 6/6), with abundant particles of quartz and many roundish, yellow inclusions (0.5-1 mm). PH 3.9, Diam. rim 15.4. *Cat. 49* seems to match both the morphological and technical characteristics of the class 'Malta 1', identified by Bruno and C. Capelli.<sup>148</sup> The production of this hybrid, local type that imitates several non-local forms (such as Lamboglia 2, 'anfore di Brindisi', 'anfore tripoli-

tane antiche'), dates to within the late 2<sup>nd</sup> and 1<sup>st</sup> century BCE.

#### Southern Iberian Fabric (Baetica?)

*Cat. 50:* MSP2008/1/B21/P1/2, 1 rim fragment of an amphora of type Dressel 9 (*fig. 30*). Hard fired, reddish yellow clay (5 YR 6/6), with some quartz (0.2 mm) and many whitish inclusions (stone, 0.3 mm); very pale brown slip (10 YR 8/3) inside and outside. PH 3, Diam. rim ? From a morphological point of view, *Cat. 50* seems to belong to an early Iberian fish-sauce amphora of Dressel's type 9, dating possibly to within the second half of the 1<sup>st</sup> century BCE,<sup>149</sup> even if the fabric of the southern Iberian series appears to be normally of a characteristic greenish colour.<sup>150</sup> The evidence from Carthage shows, however, that more fabrics of Dressel 9 amphorae are attested.<sup>151</sup> Transport amphorae from Baetica occur in small numbers among the finds from the Italian excavations at Tas-Silġ.<sup>152</sup>

#### Local Plain Wares

*Cat. 51:* MSP2008/1/B21/P2/6, 1 rim fragment of a plate or bowl (*fig. 30*). Hard fired, yellowish red clay (2.5 YR 6/8), reddish yellow on surfaces (5 YR 7/6), with many whitish microfossils (0.2 mm); on surface traces of mortar. PH 1.8, Diam. rim ? *Cat. 51* seems to belong to a quite frequent shape of plate with central depression, documented at Malta in deposits dating to within the second half of the 2<sup>nd</sup>, the 1<sup>st</sup> century BCE and the 1<sup>st</sup> centuries CE.<sup>153</sup> Although both Sagona and Quercia call this shape a 'plate', the deep profiles of these vessels seem to warrant the application of the term 'bowl' as well.

*Cat. 52:* MSP2008/1/B21/BS7/21, 1 rim fragment of a plate (*fig. 30*). Hard fired, very dark grey (7.5 YR 3/), overfired clay, probably with some bits of quartz and some voids (0.2-0.4 mm); on surface rests of a light grey (10 YR 7/2) scum? PH 2.9, Diam. rim ? *Cat. 52* is likely to be attributed to a plate close to Quercia's types 3 (4<sup>th</sup>-3<sup>rd</sup> century BCE)<sup>154</sup> or 14-15 (from the 2<sup>nd</sup> century BCE onwards).<sup>155</sup> *Cat. 53:* MSP2008/1/B21/BS11/7, 1 rim fragment of a basin (*fig. 31*).

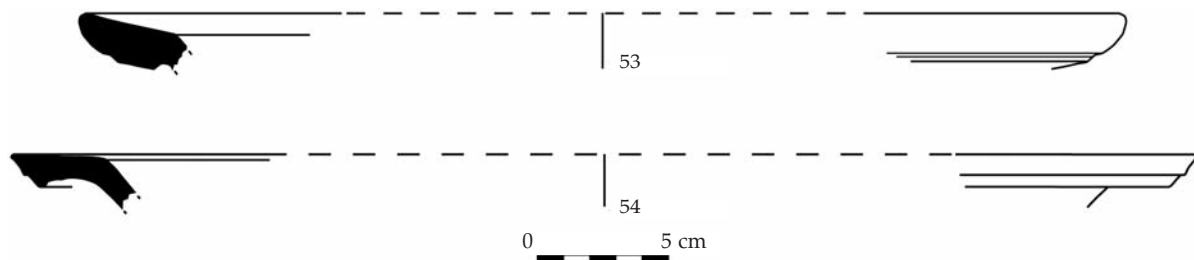


Fig. 31. Selected pottery of the Hellenistic period from tract MSP08/B21: Cat 53-54 local basins (drawings: MSP, by BB, digitised by Joris Angenon).



Hard fired clay, grey on exterior and interior (5 YR 5/1), reddish yellow at core (5 YR 6/6), with many white particles (0.3-0.5 mm) and some grey inclusions (0.3 mm); pink scum (7.5 YR 8/4) on surfaces; calcareous incrustations on part of the surface. PH 2.1, Diam. rim > 40.

Two almost identical items come from Tract B16 (MSP2008/1/B16/BS13/6 and MSP2008/1/B16/P4/2), which is in fact two fields (tracts) lower than B21; also Tract A25 in the survey yielded a comparable rim (MSP 2008/1/A25/P10/3). For a discussion on the chronology of a similar vessel ('large platter/dish') one may refer to *Cat. 16* (fig. 22), above.<sup>156</sup>

*Cat. 54*: MSP2008/1/B21/BS12/16, 1 rim fragment of a basin (fig. 31).

Hard fired clay, light red on exterior and interior (2.5 YR 6/8), weak red at core (2.5 YR 5/2), with many black grits (0.1-0.2 mm) and single brownish yellow, roundish inclusions (0.2-0.4 mm); light grey (2.5 Y 7/2 – 10 YR 7/2) scum on surfaces. PH 1.9, Diam. rim 47. *Cat. 54* matches Quercia's type 11 of the basins documented at Tas-Silġ; it is attributed to the Late Republican and Early Imperial period, but possibly already in use from the 3<sup>rd</sup> century BCE onwards.<sup>157</sup> A comparison from a disturbed context in Tas-Silġ (room/altar 38), containing local Late Punic pottery of the Hellenistic period, has been dated slightly earlier than the 1<sup>st</sup> century BCE/1<sup>st</sup> century CE.<sup>158</sup> Tract B21 has yielded a second item of this shape (B21/BS11/6).

#### *Roman period (Early Imperial: Late 1<sup>st</sup> Century BCE - 1<sup>st</sup> Century CE)*

##### *Italian Terra Sigillata*

*Cat. 55*: MSP2008/1/B21/BS1/17, 1 base fragment of plate (fig. 29).

Very hard fired, very fine pink clay (5 YR 8/4), with many tiny voids; red slip inside and outside (2.5 YR 4/8). Incised concentric circle, surrounded by rouletting on tondo. PH 2.3, Diam. base 11.

*Cat. 55* may be attributed to a plate of the types Consp. 6.4-5, Consp. 19.3 or Consp. 21.5-8, all more or less datable to within the second quarter and the middle of the 1<sup>st</sup> century CE, with single items circulating still during the Flavian period.<sup>159</sup>

##### *Transport amphora*

##### *Campanian Fabric*

*Cat. 56*: MSP2008/1/B21/F1/17, 1 rim fragment of an amphora of type Dressel 2-4 (fig. 32).

Hard fired, light red clay (2.5 YR 6/6), with abundant black (volcanic) particles (0.5 mm); on internal and external surfaces very pale brown slip (10 YR 8/3). PH 5, Diam. rim 10.4.

This extremely widespread type has been exhaustively discussed by many authors.<sup>160</sup> It derived from the late Hellenistic Coan series and was imitated in many wine-producing areas around the Mediterranean from the late 1<sup>st</sup> century BCE. At Carthage, Campanian Dressel 2-4 amphorae are mainly documented to within phase I

(40/20 BCE-30 CE).<sup>161</sup> The data collected by Bruno show that on Malta these amphorae are clearly less well-represented in comparison to the earlier amphorae of the Dressel 1 type from the same production area.<sup>162</sup>

#### *Roman Period (Middle Imperial: 2<sup>nd</sup>-3<sup>rd</sup> Century CE)*

##### *Transport amphorae*

##### *North African fabric (Tunisia?)*

*Cat. 57*: MSP2008/1/B21/BS5/8, 1 rim fragment of an amphora of Bonifay's type 18 (fig. 32).

Hard fired, red clay (2.5 YR 5/6), with many white grits (foraminifera? 0.1-0.2 mm) and some voids (0.2 mm); pale yellow slip (2.5 Y 8/4) inside and outside. PH 4.4, Diam. rim ?

*Cat. 57* belongs to a large group of possibly Tunisian, not yet standardized amphorae originating in several production centres that were active within the 1<sup>st</sup> and 2<sup>nd</sup> centuries CE.<sup>163</sup> In his classification of the North African amphorae, M. Bonifay has described these probable fish-sauce containers as type 18.<sup>164</sup> The present item finds a good comparison in an amphora of local fabric found on the site of Bir Abbad (Ksour Essaf region, Tunisia), and apparently associated with vessels of the Africana IIA type 'senza gradino', dating to the 2<sup>nd</sup>-3<sup>rd</sup> century CE.<sup>165</sup> One more parallel comes from Uzita/Uzitta.<sup>166</sup>

##### *Northern Adriatic Fabric*

*Cat. 58*: MSP2008/1/B21/BS9/4, 1 handle fragment of an amphora of the 'Forlimpopoli' type? (fig. 32).

Hard fired, white clay (2.5 Y 8/2), on surface white (5 Y 8/2), with many whitish stony particles (0.2-0.4 mm) and some voids (0.2 mm). PH 2.6, Diam. neck 7.

The handle fragment *Cat. 58* may be attributed to an amphora of the so-called 'Forlimpopoli' class, a series of wine containers with flat bottom, produced in the Emilia region from the second half of the 1<sup>st</sup> century CE for about two centuries. It has been documented on North African sites as Berenice/Benghazi as well.<sup>167</sup>

##### *Local Slipped Ware*

*Cat. 59*: MSP2008/1/B21/P6/16, 1 rim fragment of a bowl (fig. 32).<sup>168</sup>

Hard fired clay, brown on exterior and interior (7.5 YR 5/2), reddish yellow at core (5 YR 6/6), with many black grits (0.2 mm) and abundant microfossils (0.2-0.5 mm); reddish yellow slip outside, the dark grey (5 YR 4/1) slip of the internal surface appears to be misfired. Traces of mortar on external surface (from secondary use). PH 2.8, Diam. rim 30.8.

*Cat. 59* may well correspond to Sagona's 'Local Red Ware' of the Roman Imperial period.<sup>169</sup> The present fragment seems to imitate the African Red Slip series, and particularly variant 8B of Hayes' classification, dating to the second half of the 2<sup>nd</sup> or first half of the 3<sup>rd</sup> century CE.<sup>170</sup>

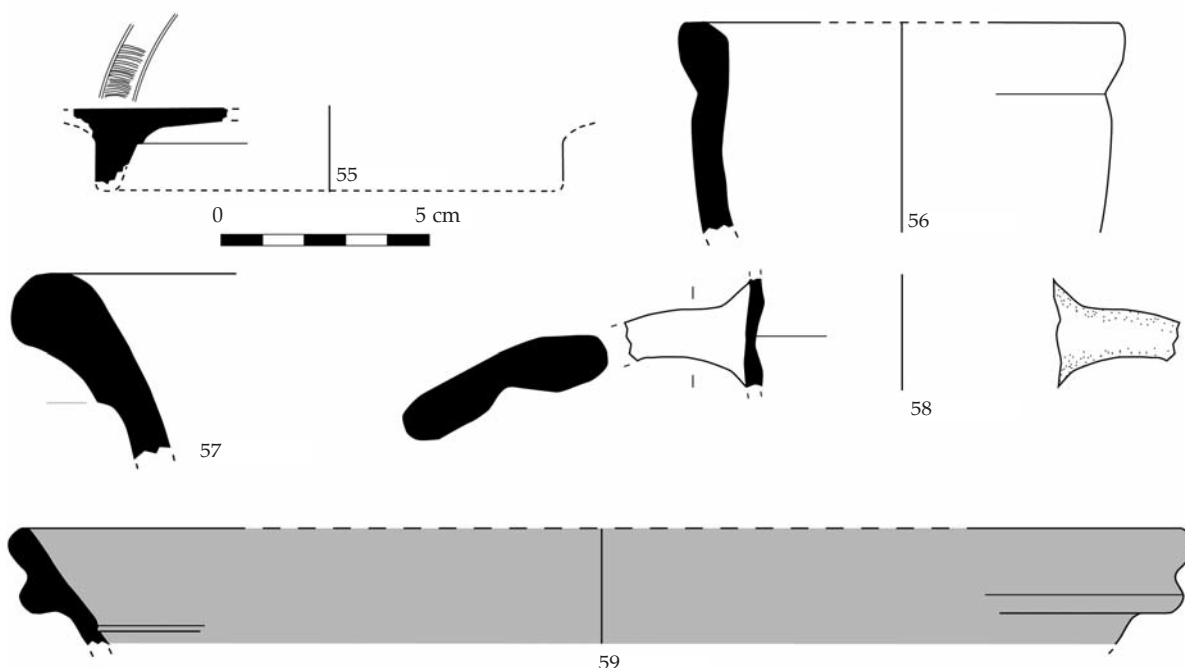


Fig. 32. Selected pottery of the Roman period from tract MSP08/B21: Cat. 55 Italian Terra Sigillata plate; Cat. 56 Campanian transport amphora; Cat. 57 North African transport amphora; Cat. 58 northern Adriatic transport amphora; Cat. 59 local slipped bowl (drawings: MSP, by BB, digitised by Joris Angenon).

#### TRACT MSP08/B74

Tract B74, which is part of the garigue plateau of the Ġebel Ghawżara site to which Tracts B16 and B21 belong (fig. 5), has yielded 35 finds. Nine diagnostic fragments may be connected to the site's occupation during the Phoenician/Punic (see Cat. 60) and (Late) Hellenistic (see Cat. 61) periods.<sup>171</sup> Especially the lamp Cat. 60 is suggestive of the fact that this Phoenician/Punic material found on top of the garigue plateau may be interpreted as material dumped after the excavation of graves at the edge of the garigue, probably sometime in the 19<sup>th</sup> or early 20<sup>th</sup> century CE (see above, and fig. 16).

#### Phoenician/Punic Period (4<sup>th</sup>-3<sup>rd</sup> Century BCE)

##### Imported (?) Plain Ware

Cat. 60: MSP2008/1/B74/P4/1, 1 fragment forming the profile of a lamp of Deneauve's type VII/VIII (fig. 33). Hard fired, light reddish yellow clay (7.5 YR 6/6), with many whitish inclusions (0.2 mm) and some voids (0.2 mm); on surface rests of white slip (5 Y 8/2). H 2.7, Diam. rim 7, Diam. base 3.8.

Lamps of this particular shape are not infrequently encountered in Maltese grave contexts. In fact, Cat. 60 seems to match the lamp shapes characteristic of Sa-

gona's phase IV, that is to say ca 300-100 BCE.<sup>172</sup> At Carthage, the latest variants of the ancient Phoenician double-spouted lamp shape of Deneauve's type VII/VIII only occur in the cemeteries and are attested in grave contexts dating to the 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE.<sup>173</sup>

The Hal Millieri site in south-eastern Malta yielded a similar lamp of a 'fairly coarse orange-brown fabric with small sand inclusions and occasional fissures', considered to be local.<sup>174</sup> It is dated to the Medieval period or later, probably till the mid-17<sup>th</sup> century CE. A similar lamp from Gozo has also been dated to the Early Modern period.<sup>175</sup> Also in archaeological collections on (western) Sicily similar lamps of later date may be found. Although these lamps are morphologically very similar to the Punic examples mentioned above as comparisons, the fact that with the present piece we are dealing with a probable import, the fact that about 75% of the finds on tract B74 date to the Phoenician/Punic and Hellenistic/Roman periods, and the relation with the emptied graves nearby, make a strong case for considering Cat. 60 as a Punic piece.

#### Hellenistic Period (Late Hellenistic: 2<sup>nd</sup>-1<sup>st</sup> Century BCE)

##### Local Plain Ware

Cat. 61: MSP2008/1/B74/P3/1, 1 fragment of rim of a basin (fig. 33).

Hard fired, light reddish yellow clay (5 YR 6/6, 5 YR 7/6 on surfaces), with many yellowish inclusions (micro-

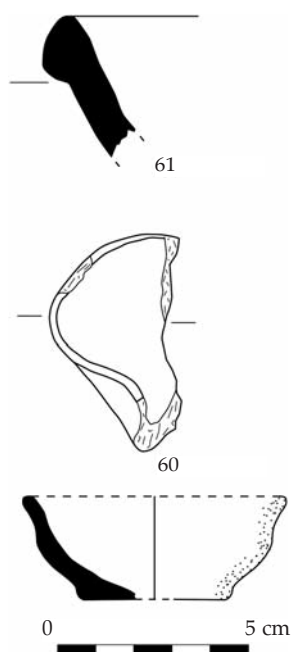


Fig. 33. Selected pottery of the Hellenistic period from tract MSP08/B74, Cat. 60 imported (?) lamp; Cat. 61 local basin (drawings: MSP, by BB, digitised by Joris Angenon).

fossils? 0.2-0.4 mm) and some voids (0.2 mm). Traces of mortar on the outside. PH 3.7, Diam. rim ?

Cat. 61 of presumably local fabric might be considered an imitation of an extremely frequent shape of the 'Pompeian Red' Ware, that is to say the basin with almond-shaped rim. Recent research on Sicily has shown that this type is well attested to within 1<sup>st</sup>-century BCE levels.<sup>176</sup>

BB

#### INTERPRETATION OF THE MSP2008 DATA (2008-2010)

The results of the 2008-2010 survey campaigns in north-west Malta have considerably enlarged our understanding of rural Malta through the ages. If one looks at the data available for the wider area in 2008 (fig. 3), it is clear that the previous and less systematic archaeological exploration mainly centred upon the rich and monumental Prehistoric period of the island, with the Phoenician/Punic and Hellenistic/Roman periods taking a more modest second place. The systematic approach of the present survey has clearly balanced the diachronical picture.

The human presence in prehistoric times seems well attested by finds, dispersed over the survey area, of lithic material (Cat. 1-3, fig. 18) as well as ceramic finds of the Bronze Age (Cat. 4-5, fig. 19). That the fragment of a Temple period (carinated) bowl (Cat. 4, fig. 19) has been found just below the escarpment of a garigue plateau may not be coincidental, but may effectively hint at the human occupation pattern of the landscape during the

second half of the 3<sup>rd</sup> millennium BCE.

The first securely datable finds from the 1<sup>st</sup> millennium found in the survey (at least in the part studied up to this moment) date to the 6<sup>th</sup> or 5<sup>th</sup> century BCE (cf. the rock cut tomb, fig. 16), or more precisely the last quarter of the 6<sup>th</sup> and first quarter of the 5<sup>th</sup> century BCE (Cat. 6, fig. 20). Some finds, however, seem to suggest earlier dates (Cat. 7-8, fig. 20, and Cat. 44, fig. 29). The fact that in the case of Cat. 6 we are dealing with an imported Corinthian olive oil container may perhaps be suggestive of an agricultural regime at the time that (still) was not based upon a (sufficient) production of olive oil. The find was made in a tract close to and perhaps belonging to the wider Tal-Ghazzi site.

The seminal article of D. Locatelli on the oil production of the San Pawl Milqi site has clearly shown that the Roman villa estate must have controlled an area in the range of 10 to 14 hectares during 'periodo VI' of Locatelli (second quarter of the 3<sup>rd</sup> century to the late 3<sup>rd</sup> or beginning of the 4<sup>th</sup> century CE), producing a yearly yield of 7,500 to 14,000 kg of oil.<sup>177</sup> If the intermediate distances of the sites are taken into account and one assigns each estate a territory that reaches at least to the valley bottom, one may indeed arrive at estates of about 10 to 14 hectares. At least two of the three sites seem to have been characterised by the (abundant and constant) presence of water, whereas the San Pawl Milqi site seems to have been served by a large cistern, dated to 'periodo II' of Locatelli. In the case of the Ġebel Għawżara site this may even have led to the installation of a thermal bath in the (Late) Roman period, if the evidence from the Ground-Penetrating Radar survey (see above, fig. 17) on tract B55 may be interpreted in this way.

As to the early chronology of these agricultural installations, the study of the finds from the area seems conclusive. All three sites have given clear evidence of human presence, viz. occupation, during the Punic period, more particularly the 5<sup>th</sup>, 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE (but see also the comments on Cat. 40, fig. 27). The general dating of the earliest Punic occupation of the San Pawl Milqi site, as suggested by the Italian mission (the 4<sup>th</sup> or 3<sup>rd</sup> century BCE) seems at least confirmed by the preliminary study of some of the finds from the adjacent fields (see e.g. tract C181, Cat. 9; fig. 20). This phase of the site's occupation ('periodo II') in the scheme recently worked out by Locatelli is connected with channels and basins hewn out in the bedrock (now visible below the church) that may tentatively be connected with the production of



olive oil on a reduced scale.<sup>178</sup> A cistern may also be connected to this early phase.

The first coherent architectural remains at the San Pawl Milqi site belong to phase III ('periodo III'), dated to the late Republican period.<sup>179</sup> The evidently rural villa site has a large, oblong rectangular structure, detached from the main square building centred around a courtyard, that resembles the oblong rectangular building seen in the GPR-images of tract B55 (*fig. 17*). It may well have been a large barn for the storage and processing of agricultural products.<sup>180</sup> Locatelli has advanced evidence for the application of a Punic modular measuring system in the construction of the buildings of this phase that can also be seen in use in the North African (former) Punic territory.<sup>181</sup>

Although architecturally we do not have any hard evidence at hand for settlement in the area before the 1<sup>st</sup> century BCE (San Pawl Milqi; but see *Cat. 23, fig. 24*), the study of the finds and the rock-cut tomb (*fig. 16*) would firmly imply a 6<sup>th</sup>–/5<sup>th</sup>-century occupation of the landscape of a permanent nature and of a considerable scale (but see on possibly earlier dates, above). Pending excavation of some of the structures of probable Phoenician/Punic date found in the GPR survey on tracts B21 and B55, one may already postulate the idea that the three sites distinguished in the survey form the continuation of sites inhabited in the 6<sup>th</sup>/5<sup>th</sup> century BCE. Since no clear finds dating to the centuries before this period have been distinguished among the 29,309 finds studied (but see above), one may perhaps conclude that this postulated Phoenician/Punic settlement pattern in fact only came into existence in the (late) 6<sup>th</sup> or (early) 5<sup>th</sup> century BCE. One would then probably be witnessing a managed landscape of the transitional Early Punic/Middle Punic period (expressed in Carthaginian chronological terms), that seems to be a good reflexion of what is happening in North Africa and elsewhere in the central and western Mediterranean.<sup>182</sup> A direct Carthaginian economic and political involvement would, then, not be impossible, although a system of cash-cropping of oil already for this early period would seem very unlikely.<sup>183</sup>

In this connection one should also return to the odd geographical position of Malta's main urban centre of the Phoenician/Punic period at Rabat/Mdina, mentioned in the introduction. A position so far removed from the coast is without precedent within the Phoenician/Punic colonial record of the 8<sup>th</sup> and 7<sup>th</sup> centuries BCE; coastal sites are the rule. It has long been known that the present-day Salini district, situated in the north part of the

survey transect (see *fig. 2*, cf. *fig. 4*), are the remains of a far larger inner bay that may have reached as far inland as lower slopes of the Ġebel Ġhawżara (if not farther).<sup>184</sup> Although the (gradual) silting up of this large area of marshland has not yet been dated, one may suggest that it post-dates the Phoenician/Punic period. Following the conventional Phoenician/Punic colonial settlement pattern, strongly focussed upon coastal headlands, and preferentially using existing natural inner bays for shelter, one may speculate on the position of an early Phoenician/Punic colonial establishment around the inner bay, perhaps below the modern urban centre of Buġibba/Qawra, or farther south along the foothills that will be explored in a forthcoming survey campaign, scheduled for the year 2012 (see *figs 2, 4*). In this line of reasoning, the central site of Rabat/Mdina would then have formed the main centre of an already existing Maltese population, in contact with this postulated Phoenician/Punic centre near the coast, and consequently heavily influenced by it, to a level where one would consider the site to be Phoenician/Punic itself.

The three sites distinguished in the survey seem to have continued either uninterrupted or with interruption - after a serious destruction as in the case of the San Pawl Milqi site at the end of 'periodo VI' of Locatelli - into the Late Antique period and the Early Medieval period (see *figs 12–13*), as also witnessed by the study of the finds. The distribution map of the High Medieval period (*fig. 14*), admittedly still incomplete, seems to suggest already a different settlement pattern for this part of Malta. A more detailed discussion of this period and the successive ones, however, lies outside the scope of the present preliminary report on the Malta Survey Project.<sup>185</sup>

RFD, NCV, NC, AB, AP

## NOTES

- <sup>1</sup> The investigations have been made possible from the Belgian side by generous support of the Fund for Scientific Research Flanders (Belgium: FWO-Vlaanderen; project grant reference G.0162.06N). An initial reconnaissance was held in 2007 by Lieven Verdonck (LV), and again in 2008 by geomorphologist Morgan De Dapper (MDD). The team in 2008 consisted of the following: Maxine Anastasi (MA), Babette Bechtold (BB), Chris Busuttill, Evelyne Browaeys, Robert Caruana, Nathaniel Cutajar (NC), Marvin Demicoli, Alain De Wulf (ADW), Guy Dierkens (GD), Roald Docter (RFD), Dagmar Germonprez, Steven Hast, Boutheina Maraoui Telmini (BMT), Timothy Nuttens (TN), Michelle Padovani, Sophie Mortier, Iona Muscat, Thomas Pieters, Stephanie Said, Kwan Jau Siu, Jen Smets, Mevrick Spiteri (MS), Anke Thuy, Winfred van de Put (WvdP), Thomas Van de Velde,

- Caroline Van Hecke, Maria Vella, Nicholas Vella (NCV), Ann Verbruggen, LV, and Renata Zerafa (RZ). The team in 2009 consisted of the following: MA, BB, Thomas Blicke, Chris Busuttil, Juan Correa Cáceres, NC, Luisana D'Amato, Elysia Marie Darmanin, Bart Deprez, ADW, GD, RFD, Soumaya Garsallah (SG), Rudi Goossens (RG), Liesbeth Hermans, Michelle Padovani, Rebecca Farrugia, BMT, Jihène Nacef (JN), Xavier Ruiz I Cano (XRIC), Stephanie Said, Jessica Spiteri, MS, WvdP, Maria Vella, NCV, LV, and Abigail Zammit. The team in 2010 consisted of the following: MA, Mark Attard, BB, Karl Cachia, Chantal Marie Cassar, Eve Cocks, NC, Elysia Marie Darmanin, Bart Deprez, Raissa Deguara, GD, RFD, Liesbeth Hermans, Narcisse Merlier, Michelle Padovani, Stephanie Said, Jessica Spiteri, Tiffany Lizen, WvdP, and NCV. The Project is also grateful to the tenant farmers or landowners who allowed us free access to their fields and for providing us with useful snippets of information related to the fields they till. The present contribution is based upon a conference contribution of 2009 (Vella et al. forthcoming), which is largely reworked, expanded and updated; see also De Wulf et al. forthcoming.
- 2 When possible, distinction is made between 'Phoenician' and 'Punic', following the general practice within the discipline: 'Phoenician' for the earliest phase of the westward colonial expansion and 'Punic' for the chronological phase from the 6<sup>th</sup> century BCE on, when, it is commonly held, Carthage attains a special position among the 'Phoenician' settlements in the West. The combined label 'Phoenician/Punic' is used here when such a distinction is not possible. Only for the material culture of Carthage, the label 'Early Punic' is used instead of 'Phoenician', see Maraoui Telmini et al. forthcoming and also below, 'chronology'.
  - 3 See van Dommelen/Gómez Bellard 2010.
  - 4 Vella 2008. A first attempt of discussing the rural landscape of Malta on the basis of published data may be found in Vidal González 2003.
  - 5 Said-Zammit 1997; Sagona 2002.
  - 6 Bonanno 1977; Bruno 2004; Bruno 2009.
  - 7 See also comments in Vella 2010, 462; since the Lisbon conference paper was delivered new evidence for the exploitation, seemingly starting in the 5<sup>th</sup> century BCE, of a micro-region in Gozo for the production of wine has been put forward (Pace/Azzopardi 2008).
  - 8 Vella 2008, 79-80. In the course of this survey a late 4<sup>th</sup>/early 3<sup>rd</sup> century BCE tomb was encountered, excavated and published, Vella et al. 2001.
  - 9 Pedley/Clarke/Galea 2002, 39.
  - 10 The survey seems to have come very timely, since in 2009 and 2010 it could be observed that areas surveyed in the previous year(s) were seriously transformed with the introduction of soil mixed with a fine aggregate of Coralline Limestone to facilitate drainage of soil being prepared for the planting of vines.
  - 11 Hunt/Vella 2008; Vella/Spiteri 2008.
  - 12 Cabreo 1838.
  - 13 Although the theoretical and methodological literature on archaeological surveys is vast, reference should be made to one of the first intensive field surveys in Greece, the Boeotia Survey, for its consequent development of survey theory over the years: Bintliff/Howard/Snodgrass 2007, with full references to earlier literature. For useful summaries see Mattingly 2000 and Banning 2002.
  - 14 Both LV and MDD had been members of the Potenza Valley Survey Project (PVSP). See, for a concise presentation of the survey, Verreyke/Vermeulen 2009, with full references to the preliminary and final survey reports, a.o. in BABesch 2001, 2002, and 2005. Apart from 68.5 km<sup>2</sup> extensively surveyed (a.o. by aerial reconnaissance), the project intensively surveyed 10.72 km<sup>2</sup> in three sample areas, but only considered the ploughed fields (Verreyke/Vermeulen 2009, 104-105). Line walking took place at 5 to 15 m intervals depending on visibility.
  - 15 A full discussion may be found in De Wulf et al. forthcoming.
  - 16 The fact that especially these garigue plateaux are endangered by urban developments has been highlighted in the press on several occasions; see e.g. E. Deidun, Garigue down the drain, *The Sunday Times* (Malta), September 5, 2010, 59.
  - 17 De Schacht et al. 2008; Stal et al. 2010; Werbrouck et al. 2011.
  - 18 Vassilopoulou et al. 2002.
  - 19 De Wulf et al. 2006.
  - 20 The project is grateful to Charlot Dimech and his colleagues at Datatrak who provided advice about the choice of aerial imagery needed to support our work.
  - 21 Zhang et al. 1996.
  - 22 Luttrell 1975, 13; Dudley Buxton/Hort 1921, 131.
  - 23 Two local fabrics have additionally been distinguished in the frame of the Vienna-based FACEM project, to which the Malta Survey Project has contributed with selected samples, see <http://facem.at/malta-c-1>; <http://facem.at/malta-c-2>.
  - 24 Sagona 2002, 77-84.
  - 25 Sagona 2002, 23-76, with table 1. See the review by Vella 2005 who contests the claims for the early presence of the Phoenicians in Malta and Sagona's response to it (Sagona 2008).
  - 26 Bechtold 2010, esp. 4-5.
  - 27 Zammit 2011.
  - 28 On this, see also Bruno/Cutajar 2002, 109-111.
  - 29 The chronology as given by Sagona (2002, 24, table 1) is rather nebulous in this and the following phase: she gives 410-300 BCE for this sub-phase of III, but also includes the beginning of Phase IV, apparently till the Roman conquest of Malta in 218 BCE. See also Sagona 2008, 528-532.
  - 30 A recent experimental study on visibility factors (Tienhoven 2010) has clearly demonstrated that the common parameters employed in grading the different phases of visibility (vegetation and soil preparation) cannot be considered to be the sole determining factors. Factors such as angle of sunlight, contrast and false targets play an equally important role. Remarkably, statistical analysis showed that ploughed fields appear to be rather unfavourable to visibility, contrary to common opinion.
  - 31 The latter option had already been considered during the campaign, in view of the fact that a vineyard had recently been put in place within this cluster. It could be observed on several occasions that for such agricultural transformations the soil was improved with soil brought in from elsewhere; see also n. 10 above.
  - 32 Tal-Ghazzi consists of the following tract numbers: A106-A136 and A161. Gebel Ghawzara is more difficult to define in spatial terms, but the following tracts definitely belong to the site: B21, B16, B55, B83, B99, B74. San Pawl Milqi is pronounced as is, but the letter q in Standard Maltese corresponds to a glottal stop, very much like the glottal stop in the Cockney word bo'el for bottle.

- <sup>33</sup> Cabreo 1838, 36-37.
- <sup>34</sup> Both the villa of San Pawl Milqi with its olive pressing installations and the olive pressing installations of Bidnija (i.e. on our tract B21) occurred already on the distribution map made by Bonanno for the Roman period, Bonanno 1977, 76 (= Vidal González 1996, 185, fig. 9).
- <sup>35</sup> Zammit 1912, n.p. [item 14]; also Ashby 1915, 48.
- <sup>36</sup> See Vella et al. forthcoming, fig. 5.
- <sup>37</sup> Locatelli 2008, fig. 2.
- <sup>38</sup> This had not been noted in the field, probably due to the fact that passes were made up-slope on a long but rather narrow field: each pass, therefore, contained only a small number of finds. Only by comparing the totality of the finds of the whole tract and of all passes, it became clear that the picture differed considerably from the regular background scatter encountered on all tracts in the survey area.
- <sup>39</sup> Cabreo 1838, f. 40.
- <sup>40</sup> *Missione*, 1964-1971.
- <sup>41</sup> Sagona 2002, 653, fig. 333, plan 3.
- <sup>42</sup> Rossignani 1969, 105; Cagiano de Azevedo 1969a, 95, fig. 7 (T5), pl. 27,2.
- <sup>43</sup> Garbini 1968, with pl. 31,2; Cagiano de Azevedo 1969b, 114.
- <sup>44</sup> See especially Locatelli 2008, and the concluding section, below.
- <sup>45</sup> These trials were carried out at the sites of Ġħar ix-Xiħ (Gozo) and at the Żejtun Roman villa (Malta). The results will be published separately.
- <sup>46</sup> The following conventions are used in the catalogue: H = Height, Diam. = Diameter, L = Length, PH = preserved Height, PL = preserved Length, PW = preserved Width, Th = Thickness, W = Width, Colour descriptions follow *Munsell Soil Color Charts* 1990 Revised edition. Measurements are in cm unless otherwise stated. Inventory numbers of the finds consist of the project's code (MSP2008), the designation of the transect number (1), the tract indicator (e.g. B155), the pass, concentration, wall, or block survey number (e.g. P2, C1, W4, BS24, respectively), and an individual number.
- <sup>47</sup> Vella 2009, 95.
- <sup>48</sup> Evans 1953, 59, fig. 2; Evans 1971, fig. 37,8.
- <sup>49</sup> See Trump/Stoddart/Malone 2009, 233.
- <sup>50</sup> Tanasi 2011, 90.
- <sup>51</sup> Koehler 1981, 451; Whitbread 1995, 255-346, esp. 255-257.
- <sup>52</sup> Koehler 1981, 452, esp. pl. 98f of the end of the 6<sup>th</sup> century BCE. Her list of sites with three or more examples of the 6<sup>th</sup> century BCE include Athens, Olympia, Corcyra, Selinus, Gela, Syracuse, Leontini, Leuca, Metapontum, Graviscae and Rome.
- <sup>53</sup> Koehler 1981, 452 (Gela); Sourisseau 2006 (Camerina: 209 examples from the beginning of the 6<sup>th</sup> till the beginning of the 5<sup>th</sup> century BCE).
- <sup>54</sup> From the University of Hamburg excavations in the settlement, dating between ca 725 and 550 BCE: Docter 2007, 618, 654-655, figs 335-336, 357. That the necropoleis have not yielded any is hardly surprising, given the fact that Greek amphorae are absent from the funerary repertoires of the metropolis altogether.
- <sup>55</sup> Rossignani 1972, 50-51, fig. 9,10-11 (= Vidal González 1996, fig. 56,10-11); also Ciasca 2000, 1288, 1292, fig. 1.
- <sup>56</sup> Ciasca 1999, 76, 86, figs 7-8; Ciasca 2000, 1288, 1292, fig. 1.
- <sup>57</sup> Sagona 2002, 195-200, 661, 663, figs 341,12-14 (but esp. 14), 343,9.
- <sup>58</sup> Briese/Docter 1992, 35, 33, 41; in general on the cultural phenomenon of adaptation of these Greek shapes into the Phoenician/Punic pottery repertoire, see Docter forthcoming.
- <sup>59</sup> Quercia 2004/2005, 340, 342, 344, figs 4-5.
- <sup>60</sup> Peserico 2002, 21-27, fig. 4, pl. 3.
- <sup>61</sup> Rossignani 1972, 54, fig. 11,1-2.
- <sup>62</sup> D'Andria 1973, 37, fig. 14,2-3.
- <sup>63</sup> Quercia 2004/2005, 340, 342, 344, figs 4-5,5 with reference to the occurrence of the type in Phoenician/Punic tombs (Sagona 2002) on p. 342, n. 26.
- <sup>64</sup> Rossignani 1972, 54, fig. 11,5.
- <sup>65</sup> D'Andria 1973, 37, fig. 14,1.
- <sup>66</sup> Quercia 2004/2005, 344, 346, cf. fig. 8,5 (not exact in rim shape and also of later date). See also comments at *Cat.* 8-9.
- <sup>67</sup> Sparkes/Talcott 1970, 134, pl. 33, fig. 9. For their occurrence in Carthage, see Bechtold 2007b, 520, fig. 279.
- <sup>68</sup> Rossignani 1973, 60, fig. 16,4 ('area sud'). She puts these bowls in one group with the larger ones (her fig. 16,2-3), which may have been inspired by other Greek vessel shapes, like for example, the one found in Tas-Silg: D'Andria 1972, 90, cat. D36, fig. 15,16 ('Lamboglia 25', dated to the late 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE).
- <sup>69</sup> D'Andria 1972, 89, cat. D34-35, fig. 15,14-15 ('Lamboglia 24A', dated to the 3<sup>rd</sup> and 2<sup>nd</sup> centuries BCE).
- <sup>70</sup> Quercia 2004/2005, 343-344, 346, fig. 7,8 (large version) and cf. fig. 8,6 (small version, not exact in rim shape and also of late date).
- <sup>71</sup> Ramón 1995, 197-198, 412-413, 527-531, 625, figs. 63 (esp. fig. 63,1), 164-168, 259, map 63.
- <sup>72</sup> Sagona 2002, 637, 730, fig. 317,4. Malta is missing on Ramón's distribution chart, Ramón 1995, 625, fig. 259, map 63.
- <sup>73</sup> Ramón 1995, 205-206, 425, 535-536, 630, figs 74, 172-173, 264, map 74. Malta is missing on this distribution map.
- <sup>74</sup> Ramón 1995, 209, 429, 538, 632, figs 78, 175, 266, map 78.
- <sup>75</sup> From 'area sud', Rossignani 1972, 58-59, fig. 14,4; also Ramón 1995, 122, 632, fig. 266, map 78.
- <sup>76</sup> Rotroff 1982, esp. 14 (fabric), 6-13, 36 (chronology); in general on relief bowls Docter 2001.
- <sup>77</sup> See e.g. Rotroff 1982, pl. 88,398, imported.
- <sup>78</sup> Bonanno 2005, 168-169, with fig.
- <sup>79</sup> Hayes 1972, 20-25, fig. 2.
- <sup>80</sup> Lund 1995, 476.
- <sup>81</sup> Rossignani 1967, 68-69, figs. 10,3, 10,5.
- <sup>82</sup> Blagg 1990, 58-60, fig. 14,42.
- <sup>83</sup> Sagona 2002, 287-288, 452, fig. 132,12 (horse) and several riders on horseback (Mithras); p. 657, fig. 337,2 (bovine).
- <sup>84</sup> Neeft/Docter 2009, 9-10, fig. 1.
- <sup>85</sup> Rossignani 1973, 59 ('area sud').
- <sup>86</sup> Rossignani 1969, 102-104, pls. 28,1-4, 29,1; Cagiano de Azevedo 1969a, 95, fig. 7 (south of S11), pl. 27,3.
- <sup>87</sup> E.g. Rakob 1991, pl. 69,7. See also Schmidt 1997, generally on the *pavimenta punica*; Schmidt 2007.
- <sup>88</sup> Fantar 1984, 504-505, 537, pls L-LI (*opus tessellatum*).
- <sup>89</sup> Rossignani 1968, 69, pl. 36,5 (*opus signinum*).
- <sup>90</sup> Fantar 1984.
- <sup>91</sup> In Carthage, for example, only 12 tile fragments were encountered in contexts of the Punic period or could be attributed to types of that period, Schwandner 2007, 260-263, cat. 1201-1212, figs 94-100. Apparently, Punic houses seem to have been characterized by flat roofs, with only few and special tile covered areas, like small porticos (Docter/Niemeyer/Schmidt 2007, 190-191, fig. 73, differently Schwandner 2007, 260).



- <sup>92</sup> Pedley/Clarke/Galea 2002, 56-57, fig. 69.
- <sup>93</sup> They may have been referred to in Rossignani 1968, 69.
- <sup>94</sup> Cintas 1976, 94, pl. LVI, 3-4 (Kerkouane); Fantar 1984, 278-282, 387-388, pl. III (Kerkouane); Schmidt 2007, 209-210, fig. 81, pl. 24b, e (Carthage); generally Mezzolani 1999, 159-161, 165, figs 1-2, 4, 6 (Carthage and Kerkouane, mentioning two further examples from Sousse).
- <sup>95</sup> Mezzolani 1999, 163-164.
- <sup>96</sup> Mezzolani 1999, 163-164, n. 39, 41: Th 3-6 cm vs. 2-3 cm.
- <sup>97</sup> Roman Domus: Bonanno 2005, 160 (chronology), 164 with fig. (tile floor). The following quotation is his.
- <sup>98</sup> To the best of our knowledge, this floor has not yet been published. It is situated in the south-eastern corner of room F, just to the right, when entering F from door S7, see Cagiano de Azevedo 1969a, fig. 7 (fold-out plan of the site).
- <sup>99</sup> Cintas 1976, 94, pl. LVI, 1-2 (Carthage, Maison Clariond); Mezzolani 1999, 161-162, 164, figs 3, 5 (Kerkouane). Mezzolani lists many more examples in North African contexts dating till within the Roman period.
- <sup>100</sup> ARS 104: Hayes 1972, 160-166, fig. 30, esp. fig. 30, 15-16 (ARS 104B, dated to 570-600 CE with late versions dating even to 625+ CE); ARS 105: Hayes 1972, 164, 166-169, fig. 31.
- <sup>101</sup> Lund 1995, 533-538.
- <sup>102</sup> Lund 1995, 538, 611, fig. 16.
- <sup>103</sup> Bruno/Cutajar 2002, 128.
- <sup>104</sup> Bruno/Cutajar 2002, 115, 119, 123.
- <sup>105</sup> Bruno/Cutajar 2002, 119.
- <sup>106</sup> Ciasca 1967, 35, fig. 6, 21-22 ('area 2 sud'); Martinelli Coco 1972, 26, figs. 5, 1, 5, 4 ('area nord').
- <sup>107</sup> Robinson 1985, 154.
- <sup>108</sup> Hayes 1980, 3-10.
- <sup>109</sup> A. Wetz, manager of Malta Pipeworks at Marsa, who works with briar, kindly informs that neither he nor his father remember reed pipes being made locally. In their opinion they were imported. A resident from Zejtun interviewed in 1992 remembered an old man who made and sold pipes. He also said his grandfather bought red *pipi tal-qasba* from itinerant North Africans who sold them in Malta before 1940 at two and a half pence (less than a cent), along with the sweet sedge root *habb ghaziż*, the latter being a treat for the children. According to the late Salvu Axiq, a life-long pipe smoker, the Gozitan potter Carmel Sacco dug and processed clay from il-Harrax. Sacco occasionally made pipes for Axiq. Tessie Vella, formerly of Rabat, said a professional potter worked at Bir Riebu (a suburb of that town) in the 1930s. He made pipes as a side-line for his friends. She also remembered North African nationals selling attractive pipes in cream coloured clay.
- <sup>110</sup> Cutajar 1987.
- <sup>111</sup> See e.g. Wood 2008.
- <sup>112</sup> Wood 2001, 85.
- <sup>113</sup> Freller 1997, 83.
- <sup>114</sup> Copy of illustration in the National Library (Valletta); present whereabouts unknown.
- <sup>115</sup> Badger 1989, 92.
- <sup>116</sup> Museum of Fine Arts Valletta.
- <sup>117</sup> E.g. from the Quarantine Harbour, Wood 2008, 18-21, figs 4-5 (QH023, QH048, QH055, QH063).
- <sup>118</sup> Only very few fragments from this tract seem to date to Late Antiquity. Study of the later finds by other members of the finds' team has shown that the site was in use well into the Middle Ages.
- <sup>119</sup> MSP08/B16/BS14/6, see Hayes 1972, 41-43, fig. 6; Lund 1995, 483. I owe the identification of this and the following fragment to K. Schmidt (Tübingen).
- <sup>120</sup> MSP08/1/B16/BS13/14; see Hayes 1972, 19-43, figs 1-6.
- <sup>121</sup> Sagona 2002, 24, 665, fig. 345.
- <sup>122</sup> Groenewoud/Vidal González 2000, 194-196, figs 4-5.
- <sup>123</sup> Ciasca 1985, 20-22; Ciasca 2000, 1291, 1296, fig. 6. See also Bonanno 2005, 110-113 with figs.
- <sup>124</sup> Toepfer 2011, 57, fig. 18: 62.3% (N=122) of the fragments may be attributed to urns of Sagona's type III-IV:4a-b.
- <sup>125</sup> Vegas 1999, 179-180, fig. 87a; Bechtold 2007a, 380-382, sub-type A, fig. 193, with further references.
- <sup>126</sup> Vandermeresch 1994, 69-72.
- <sup>127</sup> See now Gassner/Trapichler 2010, 164, fig. 109, phase C3.
- <sup>128</sup> Campagna 2000, 446-447, cat. 9-15, fig. 1d: variant 2.3.1.
- <sup>129</sup> Anelli 2001, 42, 44, pl. 6, 70, dated to the late 4<sup>th</sup> or early 3<sup>rd</sup> century BCE.
- <sup>131</sup> See FACEM: <http://facem.at/pae-a-3>.
- <sup>132</sup> For a full discussion of this phenomenon, see Bechtold forthcoming, § 13, B.5, 'impasto 9'.
- <sup>133</sup> Fulford 1994, 64, 66, fig. 4, 9.
- <sup>134</sup> For a first discussion of the presence of handmade cooking pots within archaeological deposits of Malta see Blagg 1990, 66-69, fig. 17.
- <sup>135</sup> Peserico 2002, 29-31, pl. 5.
- <sup>136</sup> Ciasca 1999, 77. A slightly earlier beginning - towards the end of the 5<sup>th</sup> century BCE - of the documentation of this technique has been recently proposed by Quercia (2004-2005, 342).
- <sup>137</sup> Rossignani 1967, 64, pl. 51, 3. Although not explicitly referred to on p. 64, she lists this type of pottery in the Punic period, but contextually to the 2<sup>nd</sup> and 1<sup>st</sup> centuries BCE. Also Rossignani 1968, 64, fig. 7, 25, pl. 32, 3 (3<sup>rd</sup>-2<sup>nd</sup> century BCE).
- <sup>138</sup> Ciasca 1985, 20.
- <sup>139</sup> Bechtold 2007a, 370, fig. 184 with further references.
- <sup>140</sup> Liko 2001.
- <sup>141</sup> Vandermeresch 1994, 81-87.
- <sup>142</sup> Sanmarti Grego/Principal Ponce 1998, 195-196, fig. 4.
- <sup>143</sup> Sanmarti Grego/Principal Ponce 1998, 196-197, fig. 6, 4-5 (Parking Emporion).
- <sup>144</sup> Lamboglia 1952, 162.
- <sup>145</sup> D'Andria 1973, 32, 35, figs. 11, 4, 12, 8.
- <sup>146</sup> See e.g. Panella 2001, 195; Martin-Kilcher 1993, 278-280; 307-309, figs 22-24; van der Werff 1986, 103-107.
- <sup>147</sup> Bruno 2004, 142, with references; Bruno 2009.
- <sup>148</sup> Bruno/Capelli 2000, 59-61, fig. 2.
- <sup>149</sup> For a recent, exhaustive discussion of this class see Martin-Kilcher 2003, esp. 79, fig. 9, 1, from a Gaulish context attributed to the middle of the 1<sup>st</sup> century BCE. Dressel 9 amphorae are documented for more or less one century and disappear with the late Augustan period (p. 77, fig. 7).
- <sup>150</sup> van der Werff 1986, 114.
- <sup>151</sup> Martin-Kilcher 1993, 311-312, fig. 26.
- <sup>152</sup> Bruno 2004, 146; D'Andria 1973, 30, fig. 10, 5: a Dressel 8 amphora from a context dated to within the Byzantine period.
- <sup>153</sup> D'Andria 1973, 36, fig. 13, 1-5, from 'fossa I'; Quercia 2004-2005, 343-344, fig. 5, 21; also Bonanno/Frendo/Vella 2000, 91-92, fig. 12, 2. Furthermore Sagona 2002, 24, 666, fig. 346, 38-39, shapes typical of phase IV (300-100 BCE).
- <sup>154</sup> For an item from Tas-Silg, 'area nord', 'fossa II', dated to within the last quarter of the 4<sup>th</sup> century BCE, see D'Andria 1973, 37, fig. 14, 2-3.
- <sup>155</sup> Quercia 2004-2005, 342-344, fig. 5. The best comparison for Cat. 52 has been published by Sagona in Bonanno/Frendo/Vella 2000, 91-92, fig. 12, 1, n. 64, 'plate with wide floor'.

- <sup>156</sup> After conclusion of the manuscript for this contribution, it became clear that the best parallels for this rim would rather be found in archaeological contexts of the 1st century BCE to the first half of the 2nd century CE, Rossignani 1967, 69-69, figs 10,3, 10,5.
- <sup>157</sup> Quercia 2004-2005, 347, n. 34, 348, fig. 10.
- <sup>158</sup> Ciasca 1967, 29, fig. 4,28.
- <sup>159</sup> Conspectus, 158-159, fig. 6,10.
- <sup>160</sup> See e.g. van der Werff 1986, 107-108; Martin-Kilcher 1993, 274-277, 299-301, figs 14-17; Panella 2001, 181, 193-194.
- <sup>161</sup> Martin-Kilcher 1998, 512-520, fig. 3; 525, fig. 7a.
- <sup>162</sup> Bruno 2004, 143; Bruno 2009.
- <sup>163</sup> Panella 2001, 209, n. 270.
- <sup>164</sup> Bonifay 2004, 102-105, fig. 54.
- <sup>165</sup> Peacock/Bejaoui/Belazreg 1989, 188-189, 210, fig. 11,1.
- <sup>166</sup> van der Werff 1982, pl. 52,10.
- <sup>167</sup> For a synthesis and further references see Panella 2001, 195, and esp. 253, fig. 3, 21-22, from Forlimpopoli, for the characteristic depression inside the neck in correspondence with the handle attachment outside.
- <sup>168</sup> The typological identification of *Cat.* 55 and 59 has been kindly made by Schmidt (Tübingen).
- <sup>169</sup> Sagona 2002, 84.
- <sup>170</sup> Hayes 1972, 33-35, fig. 4; Lund 1995, 480.
- <sup>171</sup> 1 fragment of Red Slip Ware, 2 fragments of Cooking Ware, and 6 fragments of Plain Ware vessels.
- <sup>172</sup> Sagona 2002, 666, pl. 346.
- <sup>173</sup> Deneauve 1969, 228, pl. V,66, 70; Bechtold 2007c, 597, fig. 319.
- <sup>174</sup> Blagg 1990, 74-76, fig. 20,191. The fabric description is taken from cat. 176 in Blagg 1990, 76 to which the description of cat. 191 refers.
- <sup>175</sup> Murray 1929, 21, fig. 33.
- <sup>176</sup> See Bechtold 2008, 736, cat. 5, pl. CXXVII with further references, especially to the classification of the Bolsena material by Ch. Goudineau, where this shape does not occur before the early 1st century BCE.
- <sup>177</sup> Locatelli 2008, esp. 1360-1362, 1366-1370 and p. 1353 (date). These calculations are also suggestive of the presence in the area of one or more amphora production sites. These may probably have been situated lower in the valley, where clay, water and combustibles may have been available. On the Maltese production of transport amphorae, Bruno 2004, 85-97; Bruno 2009; see also Locatelli 2008, 1354-1355, with more references in n. 10.
- <sup>178</sup> Locatelli 2005/2006, 263-264. 'Periodo I' covers all the prehistoric evidence on the site.
- <sup>179</sup> Locatelli 2005/2006, 264, 266-268, fig. 2. In a more recent article a slightly later date is proposed for this phase, the end of the 1st century CE, Locatelli 2008, 1353.
- <sup>180</sup> Locatelli 2005/2006, fig. 2.
- <sup>181</sup> Locatelli 2005/2006, 267-268.
- <sup>182</sup> Fentress/Docter 2008, esp. 120-122, 126-127; Docter 2009, esp. 186-187. One should note, however, that P. van Dommelen and C. Gómez Bellard (2008, 231-240) stress a later moment for the major rural expansion, viz. the 4th century BCE.
- <sup>183</sup> See on this already Locatelli 2008, 1364, with n. 42 for the Roman period ('managed settlement pattern'), taking over a term introduced by E. Fentress (2001, 260-266) for the Carthaginian agricultural policy of cash-cropping of wine and oil (also Fentress/Docter 2008, 120-122). One may also mention in this context the Corinthian olive oil amphora *Cat.* 6, fig. 20; also Locatelli 2008, 1365, with n. 47 and reference to Bruno 2004, 61.
- <sup>184</sup> Locatelli 2005/2006, 257; Gambin 2004, 133-139.
- <sup>185</sup> The finds from all tracts belonging to the wider Tal-Ghazzi site have been systematically screened and studied by NC, in order to obtain a clear and detailed picture of the Late Antique, Medieval and Early Modern land use. The other tracts in the survey area are currently being processed in the same way.

## BIBLIOGRAPHY

- Anelli, M. 2001, La "Fattoria delle api" sull'Irminio. La ceramica di uso comune, *Sicilia Archeologica* 34, fascicolo 99, 33-50.
- Ashby, T. 1915, Roman Malta, *JRS* 5, 23-80.
- Badger, G. 1989, *Description of Malta and Gozo*, Malta.
- Banning, E.B. 2002, *Archaeological Survey* (Manuals in Archaeology Method, Theory, and Techniques), New York.
- Bechtold, B. 2007a, Die phönizisch-punische Gebrauchskeramik der archaischen bis spätpunischen Zeit, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 327-431.
- Bechtold, B. 2007b, Die importierte und lokale Schwarzfirnis-Ware, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 492-587.
- Bechtold, B. 2007c, Lampen, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 596-608.
- Bechtold, B. 2008, Il materiale archeologico datante del SAS 6 (scavi 1990 e 1993), in R. Camerata Scovazzo (ed.), *Segesta III. Il sistema difensivo di Porta di Valle* (scavi 1990-1993), Mantova, 735-737.
- Bechtold, B. 2010, The Pottery Repertoire from Late 6th – Mid 6th Century BC Carthage, *Carthage Studies* 4, 1-82.
- Bechtold, B. forthcoming, Le anfore da trasporto da Cossyra: un'analisi diacronica (VIII sec. a.C. - VI sec. d.C.) attraverso lo studio del materiale dalla ricognizione, in M. Almonte (ed.), *Cossyra. Ricognizione topografica. Storia di un paesaggio mediterraneo* (Tübinger Forschungen zur Archäologie. Cossyra 2).
- Bintliff J./P. Howard/A. Snodgrass 2007, *Testing the hinterland. The work of the Boeotia Survey* (1989-1991) in the southern approaches to the city of Thespiiai, Cambridge.
- Blagg, T.F.C. 1990, The Pottery, in T.F.C. Blagg/A. Bonanno/A.T. Luttrell, *Excavations at Hal Millieri, Malta*, Msida, 51-80.
- Bonanno, A. 1977, Distribution of villas and some aspects of the Maltese economy in the Roman period, *Journal of the Faculty of Arts (Malta)* 6,4, 73-81.
- Bonanno, A. 2005, *Malta. Phoenician, Punic, and Roman*, Valletta.
- Bonanno, A./A.J. Frendo/N.C. Vella 2000, Excavations at Tas-Silg, Malta. A Preliminary Report on the 1996-1998 Campaigns Conducted by the Department of Classics and Archaeology of the University of Malta, *MedA* 13, 67-114.
- Bonifay, M., 2004, *Études sur la céramique romaine tardive d'Afrique* (BAR International Series 1301), Oxford.
- Briese, Ch./R.F. Docter 1992, Der phönizische Skyphos. Adaption einer griechischen Trinkschale, *MM* 33, 25-69.
- Bruno, B. 2004, *L'arcipelago maltese in età romana e bizantina. Attività economica e scambi al centro del Mediterraneo*, Bari.
- Bruno, B. 2009, *Roman and Byzantine Malta: Trade and Economy* (Maltese Social Studies 15), Malta.
- Bruno, B./C. Capelli 2000, Nuovi tipi di anfore da tra-

- sporto a Malta, in C. d'Amico/C. Tampellini (eds), *Atti della 6ª giornata: le scienze della terra e l'archeometria* (Este 1999), Este, 59-65.
- Bruno, B./N. Cutajar 2002, Archeologia bizantina a Malta: primi risultati e prospettive di indagine, *VO Quad* 3,1, 109-138.
- Buhagiar, M. 1986, *Late Roman and Byzantine Catacombs and Related Burial Places in the Maltese Islands* (BAR. International Series 302), Oxford.
- Cabreo, 1838, *Descrizione generale di tutt'i beni stabili esistenti nella isola di Malta e Gozo spettanti alla S. Chiesa Cattol. Arcivesc. di Malta colle loro denominazioni, piante, capacità, contrade, confini, concessioni, ed annuo canone e di alcuni ricognizioni terminata correndo l'anno 1838* (Manuscript held at the Cathedral Archives, Mdina, Malta).
- Cagiano de Azevedo, M. 1969a, S. Paolo Milqi. Lo Scavo, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1968*, Rome, 93-95.
- Cagiano de Azevedo, M. 1969b, Gli scavi della campagna 1968, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1968*, Rome, 109-115.
- Campagna, L. 2000, Le anfore della necropoli in Contrada Portinenti (Proprietà Leone), in L. Bernabò Brea/M. Cavalier (eds), *Scoperte e scavi archeologici nell'area urbana e suburbana di Lipari* (Meligunìs Lipàra X), Palermo, 443-478.
- Ciantar, G.A. 1772, *Malta Illustrata ovvero Descrizione di Malta* (revised edition of G.F. Abela, *Della descrizione di Malta Isola nel Mare Siciliano*, 1647), Malta.
- Ciasca, A. 1967, Tas – Silg. Lo scavo, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1966*, Rome, 25-36.
- Ciasca, A. 1985, Note sulla distribuzione di alcune ceramiche puniche maltesi, *Bulletin archéologique du Comité des Travaux Historiques et Scientifiques, nouvelle série* 19, année 1983, fascicule B, Afrique du Nord, Paris, 17-24.
- Ciasca, A. 1999, Sicilia e Malta. Note su repertori ceramici a confronto, in A. González Prats (ed.), *La cerámica fenicia en Occidente: centros de producción y áreas de comercio*, Alicante 21-24 de noviembre 1997. *Actas del I Seminario Internacional sobre Temas Fenicios, Guardamar del Segura*, 21-24 de noviembre de 1997, Alicante, 69-87.
- Ciasca, A. 2000, Imitazioni di forme esterne nella ceramica di Malta, in M.E. Aubet/M. Barthélemy (eds), *Actas del IV Congreso Internacional de Estudios Fenicios y Punicos*, Cádiz, 2 al 6 de Octubre de 1995, Cádiz, 1287-1296.
- Cintas, P. 1976, *Manuel d'Archéologie Punique II. La civilisation carthaginoise. Les réalisations matérielles*, Paris.
- Conspectus (Consp.) = Ettlinger, E. et al. 2002, *Conspectus formarum terrae sigillatae Italico modo confectae* (Materialien zur Römisch-Germanischen Keramik 10), Bonn (second edition).
- Corretti, A./C. Capelli 2003, Entella. Il granaio ellenistico (SAS 3). Le anfore, in *Quarte Giornate Internazionali di Studi sull'Area Elima* (Erice 2000), Pisa, 287-351.
- Cutajar, D. 1987, *The Malta Quarantine Shipping and Trade 1654-1697*, Mid Mel Bank, Malta.
- D'Andria, F. 1972, Catalogo della ceramica greca italiota e a vernice nera, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1969*, Rome, 77-95.
- D'Andria, F. 1973, Saggio stratigrafico nell'area Nord, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1970*, Rome, 29-41.
- Deneauve, J. 1969, *Lampes de Carthage*, Paris [1974 edition].
- De Schacht, T./W. Gheyle/R. Goossens/A. De Wulf 2008, Archaeological Research and CORONA: On the Use, Misuse and Full Potential of Historical Remote Sensing Data, in *Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East*, Madrid, 611-618.
- De Wulf, A./M. Brondeel/T. Willems/T. Neutens 2006, GPS Work of Ghent University, *Bulletin de la Société Géographique de Liège* 47, 57-72.
- De Wulf, A./R.F. Docter/C. Stal/R. Goossens/T. Nuttens/N. Vella (forthcoming), Integrated 3D Geomatics for Archaeology: Case Study Malta, in L. Halounová (ed.), *Remote Sensing and Geoinformation: not only for Scientific Cooperation. Proceedings of the EARSeL Symposium*.
- Docter, R.F. 2001, Reliefkeramik, in H. Cancik/H. Schneider (eds), *Der Neue Pauly. Enzyklopädie der Antike* 10, Stuttgart/Weimar, 885-886.
- Docter, R.F. 2007, Archaische Transportamphoren, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 616-662.
- Docter, R.F. 2009, Carthage and its hinterland, in S. Helas/D. Marzoli (eds), *Phönizisches und punisches Städtewesen* (Iberia Archaeologica 13), Mainz a.R., 179-189.
- Docter, R.F. (forthcoming), The Phoenician Practice of Adapting Greek Drinking Vessels (Skyphoi and Kotylai), in R. Graells et al. (eds), *El problema de las "imitaciones" durante la protohistoria en el Mediterráneo centro-occidental: entre el concepto y el ejemplo* (Iberia Archaeologica), Mainz a.R.
- Docter, R.F./H.G. Niemeyer/K. Schmidt 2007, Die punischen Häuser. Bautypologie und Raumfunktion, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 175-199.
- Dudley Buxton, L.H./A.V.D. Hört 1921, The modern pottery industry in Malta, *Man* 21, 130-131.
- Evans, J.D. 1953, The prehistoric culture sequence of the Maltese archipelago, *Proceedings of the Prehistoric Society* 19, 41-94.
- Evans, J.D. 1971, *The Prehistoric Antiquities of the Maltese Islands. A Survey*, London.
- Fantar, M. 1984, *Kerkouane. Cité Punique du Cap Bon (Tunisie) I*, Tunis.
- Fentress, E. 2001, Villas, Wine and Kilns: The Landscape of Jerba in the Late Hellenistic Period, *JRA* 14, 249-268.
- Fentress, E./R.F. Docter 2008, North Africa: Rural Settlement and Agricultural Production, in P. van Dommelen/C. Gómez Bellard (eds), *Rural Landscapes of the Punic World* (Monographs in Mediterranean Archaeology), London/Oakville, 101-128.
- Freller, T. 1997, *Gozo: The Island of Joy*, Malta.
- Fulford, M. 1994, The Cooking and Domestic Wares, in M.G. Fulford/D.P.S. Peacock, *The Circular Harbour, North Side. The Pottery. Excavations at Carthage. The British Mission II,2*, Oxford, 53-75.
- Gambin, T. 2004, Islands of the Middle Sea: an archaeology of a coastline, in L. De Maria/R. Turchetti (eds), *Evolución paleoambiental de los puertos y fondeaderos antiguos en el Mediterráneo occidental* (I seminario: El patrimonio arqueológico submarino y los puertos antiguos, Alicante 14-15 noviembre 2003), Rome, 127-146.
- Garbini, G. 1968, L'iscrizione punica, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1967*, Rome, 83-84.
- Gassner, V./M. Trapichler 2010, La ceramica di Velia nel IV e III sec. a.C., in *Ramses Naples. Grecs et indigènes de la Catalogne à la Mer Noire* (Bibliothèque d'Archéologie Méditerranéenne et Africaines 3), Paris, 159-166.
- Groenewould, E./P. Vidal González 2000, Punic Pottery in Malta. Typical Maltese?, in P. Bartoloni/L. Campanella



- (eds), *La Ceramica Fenicia di Sardegna: Dati, Problematiche, Confronti. Atti del Primo Congresso Internazionale Sulcitano, Sant'Antioco, 19-21 Settembre 1997*, Rome, 193-199.
- Hayes, J.W. 1972, *Late Roman Pottery*, London.
- Hayes, J.W. 1980, Turkish Clay Pipes: A Provisional Typology, in P. Davey (ed.), *The Archaeology of the Clay Tobacco Pipe* (BAR International Series 92), Oxford, 3-10.
- Hunt, C./N.C. Vella 2008, A View from the Countryside: Pollen from a Field at Mistra Valley, Malta, *Malta Archaeological Review* 7 [2004/2005], 61-69.
- Koehler, C.G. 1981, Corinthian Developments in the Study of Trade in the Fifth Century, *Hesperia* 50, 449-458.
- Lamboglia, N. 1952, La nave romana di Albegna, *Rivista di Studi Liguri* 18, 131-162.
- Liko, H. 2001, Tafelwein aus der Umgebung - Qualitätswein aus Griechenland. Herkunftsbestimmung großgriechischer Amphoren aus Velia mittels archäometrischer Analyse, *Forum Archaeologiae* 18/III (<http://farch.net>).
- Locatelli, D. 2005/2006, Nuove ricerche a San Pawl Milqi: primi risultati, in M.P. Rossignani, La ripresa delle indagini della Missione Archeologica Italiana a Malta. Nuovi dati dal santuario di Tas-Silg e dalla villa di San Pawl Milqi, *RendPontAc* 78, 257-273.
- Locatelli, D. 2008, L'oro verde di Malta. Stime sulla produzione olearia nella villa San Pawl Milqi: J. González/P. Ruggieri/C. Vismara/R. Zucca (eds), *L'Africa romana XVII: Le ricchezze dell'Africa. Risorse, produzioni, scambi* (Seville, 2006), Rome, 1351-1374.
- Lund, J. 1995, Hellenistic IIIA. Roman and Late Fine Wares from the Segermes Valley - Forms and Chronology, in *Africa Proconsularis II. Regional Studies in the Segermes Valley of North Tunisia. Pottery, Numismatics and the Antiquarian Data*, Copenhagen, 449-629.
- Luttrell, A. 1975, Approaches to Medieval Malta, in A. Luttrell (ed.), *Medieval Malta: Studies on Malta before the Knights*, London, 1-70.
- Maraoui Telmini, B. et. al, forthcoming, Defining Punic Carthage, in J. Quinn/N.C. Vella (eds), *Identifying the Punic Mediterranean*, London.
- Martin-Kilcher, S. 1993, Amphoren der späten Republik und der frühen Kaiserzeit in Karthago. Zu den Lebensmittelimporten der Colonia Iulia Concordia, *RM* 100, 269-320.
- Martin-Kilcher, S. 1998, Le vin dans la Colonia Iulia Karthago, in M. Comas/P. Padros (eds), *El vi a l'Antiguitat. Economia, producció i comerç al Mediterrani Occidental. II colloqui internacional d'arqueologia romana* (Badalona, 6-9 maig de 1998) (Monografies Badalonines 14), Badalona, 511-529.
- Martin-Kilcher, S. 2003, Fish-sauce amphorae from the Iberian peninsula: The forms and observations on trade with the north-west provinces, *Journal of Roman Pottery Studies* 10, 69-84.
- Martinelli Coco, T. 1972, Ceramica romana e bizantina dell'area nord, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1969*, Rome, 25-30.
- Mattingly, D. 2000, Methods of collection, recording and quantification, in R. Francovich/H. Patterson (eds), *Extracting Meaning from Ploughsoil Assemblages* (The Archaeology of Mediterranean Landscapes 5), Oxford, 5-15.
- Mayr, A. 1905, *Aus den Phönikischen Nekropolen von Malta*, Munich.
- Mezzolani, A. 1999, Carrelages en briques cuites dans l'architecture punique, *REPPAL* 11, 157-168.
- Missione 1964-1971, *Missione Archeologica Italiana a Malta. Rapporto Preliminare della campagna 1963-1970*, Rome.
- Murray, M. 1929, *Excavations in Malta, Part III*, London.
- Museums Department, 1905, *Museum Annual Report 1905*, Valletta.
- Museums Department, 1908-1920, *Museum Annual Reports 1907-1919*, Valletta.
- Museums Department, 1923-1940, *Museum Annual Reports 1922-1939*, Valletta.
- Museums Department, 1953-1966, *Museum Annual Reports 1952-1965*, Valletta.
- Museums Department, 1973-1974, *Museum Annual Reports 1972-1973*, Valletta.
- Museums Department, 1977-1978, *Museum Annual Reports 1976-1977*, Valletta.
- Museums Department, 1984-1986, *Museum Annual Reports 1983-1986*, Valletta.
- Neeft, K./R. Docter 2009, Een dikke petaike en een slanke aryballos uit Malta, *Mededelingenblad Allard Pierson Museum Amsterdam* 98/99, 9-13.
- Pace, A./G. Azzopardi 2008, Economic landscapes of the Maltese Islands during antiquity: a survey of ancient wine presses (Poster presented at the XVII Congresso Internazionale di Archeologia Classica), Rome.
- Panella, C. 2001, Le anfore di età imperiale del Mediterraneo occidentale, in P. Lévêque/J.-P. Morel (eds), *Céramiques hellénistiques et romaines* (Annales Littéraires de l'Université de Besançon II), Paris, 177-275.
- Peacock, D.P.S./F. Bejaoui/N. Belazreg 1989, Roman Amphora Production in the Sahel Region of Tunisia, in: *Amphores romaines et histoire économique: dix ans de recherche* (Siena 1986), Rome, 180-222.
- Pedley, M./M.H. Clarke/P. Galea 2002, *Limestone Isles in a Crystal Sea. The Geology of the Maltese Islands*, San Gwann.
- Peserico, A. 2002, Die offenen Formen der Red Slip Ware aus Karthago. Untersuchungen zur phönizischen Keramik im westlichen Mittelmeerraum (Hamburger Werkstattreihe zur Archäologie 5), Münster/Hamburg/London.
- Quercia, A. 2004/2005, La ceramic punico-maltese del santuario di Tas Silg: Analisi tipológica e funzionale, in *Un luogo di culto al centro del Mediterraneo: il santuario di Tas Silg dalla Preistoria all'età Bizantina. Atti del seminario di studi* (Roma 2005) (Scienze dell'Antichità 12), Rome, 335-354.
- Rakob, F. 1991, Pavimenta punica und Ausstattungselemente der punischen und römischen Häuser, in F. Rakob (ed.), *Die deutschen Ausgrabungen in Karthago* (Karthago I), Mainz a.R., 220-225.
- Ramón Torres, J. 1995, *Las ánforas fenicio-púnicas del Mediterráneo central y occidental* (Col·lecció Instrumenta 2), Barcelona.
- Robinson, R.C.W. 1985, Tobacco Pipes of Corinth and of the Athenian Agora, *Hesperia* 54, 149-203.
- Rossignani, M.P. 1967, Ceramica e trovamenti vari, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1966*, Rome, 63-76.
- Rossignani, M.P. 1968, Ceramica e trovamenti vari, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1967*, Rome, 57-73.
- Rossignani, M.P. 1969, Ceramica e trovamenti vari, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1968*, Rome, 97-105.
- Rossignani, M.P. 1972, Ceramica e trovamenti vari, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1969*, Rome, 47-70.
- Rossignani, M.P. 1973, Ceramica e trovamenti vari, in *Missione Archeologica Italiana a Malta. Rapporto preliminare della Campagna 1970*, Rome, 59-72.
- Rotroff, S.I., 1982, *Hellenistic Pottery. Athenian and Imported Moldmade Bowls* (The Athenian Agora. Results of Excavations of the American School of Classical Studies

- at Athens 22), Princeton, NJ.
- Sagona, C. 2002, *The Archaeology of Punic Malta* (Ancient Near Eastern Studies Supplement 9), Leuven.
- Sagona, C. 2008, Malta: between a rock and a hard place, in C. Sagona (ed.) *Beyond the Homeland: Markers in Phoenician Chronology* (Ancient Near Eastern Studies Supplement 28), Leuven, 487-536.
- Said-Zammit, G. 1997, *Population, Land Use and Settlement on Punic Malta: A Contextual Analysis of the Burial Evidence* (BAR International Series 682), Oxford.
- Sanmartí Grego, E./J. Principal Ponce, 1998, Cronología y evolución tipológica de la Campaniense A del siglo II aC: las evidencias de los pecios y de algunos yacimientos históricamente fechados, in J. Ramón Torres/J. Sanmartí Grego/D. Asensio Vilaró, J. Principal Ponce (eds), *Les facies ceràmiques d'importació a la Costa Ibèrica, les Balears i les Pitiüses durant el segle III aC i la primera meitat del segle II aC* (Arqueomediterrània 4), Barcelona, 193-215.
- Schmidt, K. 1997, *Punische Pavimente in Karthago. Entstehung und Entwicklung*, Hamburg.
- Schmidt, K. 2007, Zur baulichen Ausstattung der Häuser, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 199-213.
- Schwandner, E.L. 2007, Dachziegel, in H.G. Niemeyer et al., *Karthago. Die Ergebnisse der Hamburger Grabung unter dem Decumanus Maximus* (Hamburger Forschungen zur Archäologie 2), Mainz a.R., 260-267.
- Sourisseau, J.-C. 2006, Les amphores commerciales de la nécropole de Rifriscolaro à Camerine. Remarques préliminaires sur les productions corinthiennes de type A, in *Camarina 2600 anni dopo la fondazione. Nuovi studi sulla città e sul territorio. Atti del Convegno Internazionale – Ragusa, 7 dicembre 2002/7-9 aprile 2003*, Rome, 129-147.
- Sparkes, B.A./L. Talcott 1970, *Black and Plain Pottery of the 6th, 5th and 4th Centuries B.C.* (The Athenian Agora. Results of Excavations conducted by the American School of Classical Studies at Athens 12), Princeton, NJ.
- Stal, C. et al. 2010, Kimmelberg (Belgium) Case Study: Comparison of DTM Analysis Methods for the Detection of Relics from the First World War, in *Remote sensing for science, education, and natural and cultural heritage: proceedings of the EARSeL Symposium*, Paris, 65-72.
- Swann, J.S. 1866, Descriptions of Ancient Rock-Tombs at Ghain Tiffiha and Tal Horr, Malta, *Archaeologia* 40,2, London, 483-467.
- Tanasi, D. 2011 The prehistoric pottery, in D. Tanasi/N.C. Vella (eds), *Site, Artefacts, Landscape: Prehistoric Borġ in-Nadur, Malta*, Monza, 71-158.
- Tienhoven, D.H. 2010, Op weg naar een meer volledige benadering van zichtbaarheidsproblematiek in archeologische surveys, *TMA Tijdschrift voor Mediterrane Archeologie* 43, 32-37.
- Toepfer, H. 2011, *Maltesische Keramik. Das Fundspektrum und dessen Analyse* (Magisterarbeit Eberhard-Karls Universität Tübingen), Tübingen.
- Trump, D.H. et al. (eds), *The Pottery*, in C. Malone et al. (eds), *Mortuary customs in prehistoric Malta: Excavations at the Brochtorff Circle at Xaghra (1987-94)* (McDonald Institute Monographs), Cambridge, 220-242.
- Van der Werff, J. 1982, *Uzita: vondstenmateriaal uit een antieke nederzetting in midden Tunesie - Uzita. Matériel de fouilles d'une cité antique en Tunisie Centrale*, Utrecht.
- Van der Werff, J. 1986, The amphora Wall in the House of the Porch, Ostia, in J. Boersma/D. Yntema/J. van der Werff, *Excavations in the House of the Porch at Ostia*, *BABesch* 61, 77-137, 96-137.
- Van Dommelen, P./C. Gómez Bellard 2010, *Rural Landscapes of the Punic World* (Monographs in Mediterranean Archaeology 11), London.
- Vandermersch, Ch. 1994, *Vin et amphores de Grande Grèce et de Sicile. IVe-IIIe s. avant J.-C.* (Centre Jean Bérard Études I), Naples.
- Vassilopoulou, S./L. Hurni/V. Dietrich/E. Baltsavias/M. Pateraki/E. Lagios/I. Parcharidis 2002, Orthophoto Generation Using IKONOS Imagery and High Resolution DEM: a Case Study on Volcanic Hazard Monitoring of Nisyros Island (Greece), *ISPRS Journal of Photogrammetry & Remote Sensing*, 56,3, 24-38.
- Vella, C. 2009, The lithic toolkit of the Late Neolithic Ta' Hagra, Malta, *Origini* 31,4, 85-102.
- Vella, N.C. 2005, Phoenician and Punic Malta (review article): *JRA* 18, 436-450.
- Vella, N.C. 2008, Unravelling past agricultural landscapes in the Maltese Islands: making a case for the Phoenician and Punic periods, in A.M. Arruda/C. Gómez Bellard/P. van Dommelen (eds), *Sítios e Paisagens Rurais do Mediterrâneo Púnico. 6º Congresso Internacional de Estudos Fenícios e Púnicos* (Cadernos da Uniarq 3), Lisbon, 69-86.
- Vella, N.C. 2010, Views from the Punic countryside (review article), *JRA* 23, 459-463.
- Vella, N.C./M. Spiteri 2008, Documentary Sources for a Study of the Maltese Landscape, *Storja – Journal of the Malta University Historical Society* 30, 16-29.
- Vella, N.C. et al. (forthcoming), Life and Death in Rural Malta: First results of the joint Belgo-Maltese Survey Project (2008-2009), in A. Ferjaoui (ed.), *Actes du VIIème Congrès International des Études Phéniciennes et Puniques – Hammamet 2009*, Tunis.
- Verreyke, H./F. Vermeulen 2009, Tracing Late Roman Rural Occupation in Adriatic Central Italy, *AJA* 113, 103-120.
- Vidal González, P. 1996, *La Isla de Malta en Época Fenicia y Púnica* (BAR International Series 653), Oxford.
- Vidal González, P. 2003, Ecología y paisaje fenicio-púnico de la Isla de Malta, in C. Gómez Bellard (ed.), *Ecología del paisaje agrario. La agricultura fenicio-púnica en el Mediterráneo*, València, 255-270.
- Werbrouck, I. et al. 2011, Digital Elevation Model Generation for Historical Landscape Analysis Based on LiDAR Data, a Case Study in Flanders (Belgium), *Expert Systems with Applications* 38,7, 8178-8185.
- Whitbread, I.K. 1995, *Greek Transport Amphorae. A Petrological and Archaeological Study* (Fitch Laboratory Occasional Paper 4), Athens.
- Wood, J. 2001, Tobacco Pipes from Manoel Island, Malta, *Mariner's Mirror* 87,1, 83-88.
- Wood, J. 2008, Tobacco pipes from an underwater excavation at the quarantine harbour, Malta, *Malta Archaeological Review* 7 [2004/2005], 15-26.
- Wood, J. 2009, Malta, *Journal of the Académie Internationale de la Pipe* 2, 87-92.
- Zammit, A. 2011, *Survival of Punic culture during the Roman period: Malta and other central Mediterranean islands*. Unpublished MA dissertation, University of Malta.
- Zammit, T. 1905-1907, *Archaeological Field Notes, Book I*, Manuscript at National Museum of Archaeology Library, Valletta.
- Zammit, T. 1909-1912, *Archaeological Field Notes, Book III*, Manuscript at National Museum of Archaeology Library, Valletta.
- Zammit, T. 1912, *Annual Report of the Curator of the Museum for the Financial Year 1911-1912*, Malta.
- Zammit, T. 1912-1917, *Archaeological Field Notes, Book IV*,

Manuscript at National Museum of Archaeology Library,  
Valletta.  
Zammit, T. 1916-1921, *Archaeological Field Notes, Book V*,  
Manuscript at National Museum of Archaeology  
Library, Valletta.  
Zammit, T. 1922-1924, *Archaeological Field Notes, Book VII*,  
Manuscript at National Museum of Archaeology Library,  
Valletta.  
Zammit, T. 1924-1925, *Archaeological Field Notes, Book VIII*,  
Manuscript at National Museum of Archaeology  
Library, Valletta.  
Zhang, J. et al. 1996, VirtuoZo Digital Photogrammetry  
System: its Theoretical Foundation and Key Algorithms,  
*International Archives of Photogrammetry and Remote  
Sensing* 31,B2, 424-429.

ROALD F. DOCTER  
DEPARTMENT OF ARCHAEOLOGY  
GHENT UNIVERSITY  
SINT-PIETERSNIEUWSTRAAT 35  
B-9000 GENT  
roald.docter@ugent.be

ANTHONY BONANNO  
NICHOLAS C. VELLA  
DEPARTMENT OF CLASSICS AND ARCHAEOLOGY  
UNIVERSITY OF MALTA  
MSIDA MSD 2080  
MALTA  
anthony.bonanno@um.edu.mt  
nicholas.vella@um.edu.mt

NATHANIEL CUTAJAR  
ANTHONY PACE  
SUPERINTENDENCE OF CULTURAL HERITAGE  
173, ST. CHRISTOPHER STREET  
VALLETTA VLT 2000  
MALTA  
nathaniel.cutajar@gov.mt  
anthony.pace@gov.mt



# Winemaking Scenes on Attic Red-Figured Cups Not Crushing but Pigeage, Punching Down the Cap

Kathleen M. Lynch

## Abstract

In Brian Sparkes' 1976 BABesch article, 'Treading the Grapes,' he traced the chronological development of vintage scenes in black and red figured vase painting. He noted the appearance in the late 6<sup>th</sup> century BC of a new type of Attic red-figured image with a man treading grapes inside a large vat. In this brief note I suggest that the figure may be performing the pigeage, or punching down of the cap, a stage in the fermentation process of red wine after the initial crushing of the grapes. The pigeage process releases a substantial amount of carbon dioxide requiring treaders to hold onto a sturdy support lest they become faint. Not only do these scenes enhance our knowledge of Greek vinicultural processes, but by alluding to the lightheaded state of the treader, they also provide a metaphoric image for the effects of alcohol on the drinker viewing the image.\*

Over thirty years ago Brian Sparkes published an article in this journal, 'Treading the Grapes', in which he surveyed the different types of winemaking scenes present in Greek vase painting.<sup>1</sup> The most numerous are Attic black- and red-figured vases, and they range from ca 540 BC to ca 430 BC.<sup>2</sup> He noted that a new type of winemaking scene appeared around 500 BC exclusively on Attic red-figured kylikes (symptotic cups).<sup>3</sup> Figure 1 provides a typical example of the scene of interest.<sup>4</sup> The tondo of an Attic red-figured kylix from the excavations of the Athenian Agora features a youth inside a large lug handled vessel. The beard-

less boy's left knee is raised, suggesting a stomping action. His left arm is up and right arm down further emphasizing the 'marching' action. In each of his hands he holds a thin stick. These objects are perplexing until they are compared with more detailed scenes in which the figure grasps rope loops descending from the tondo border (fig. 2).<sup>5</sup> In the Agora example, there is no trace of a red-figured rope or added color lines over top the black gloss background. Added red is well preserved on the cup both in an inscription and a wreath on the boy's head, so if there had been ropes in added red they would also have



Fig. 1. Attic red-figured kylix tondo. Athens, Agora P 32419 (Courtesy Agora Excavations).

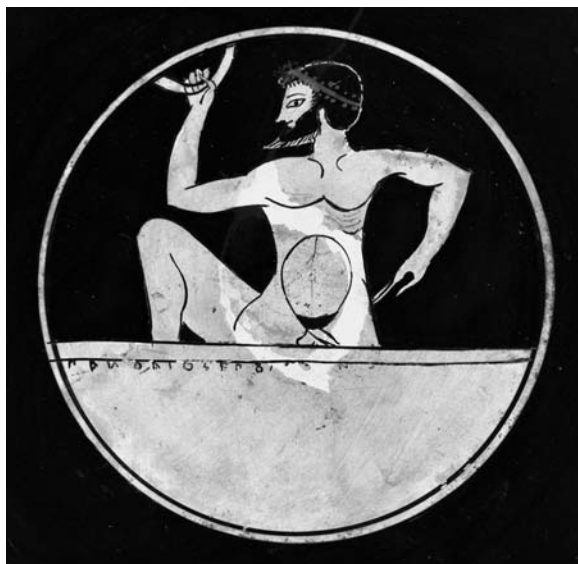


Fig. 2. Attic red-figured kylix tondo. Boston, MFA 24.453 (Photograph © 2012 Museum of Fine Arts, Boston).

been preserved. It seems that the painter expected the viewer to complete the connection between the sticks and some kind of stabilizing rope. The depiction is not literal, and to our modern eyes, the vase painter has provided insufficient detail, or perhaps he, himself, did not understand fully the purpose of the loops.<sup>6</sup>

Variations on the scene are limited. The treader is always a male, and usually a youth, but occasionally he is a bearded adult (*fig. 2*). Sometimes he grabs the side of the vat to steady himself.<sup>7</sup> In a related series of scenes a profile figure either stands outside of the vat and leans in or is inside the vat, bent at the waist.<sup>8</sup> Most of the red-figured cup scenes with a figure and a vat can be attributed to the Euergides Painter and his circle.<sup>9</sup> The master himself favored the version with a profile figure. Also, vase painters stylistically associated with the Euergides Painter used the inscription 'ΠΡΟΣΑΓΟΡΕΥΩ' frequently and uniquely.<sup>10</sup> The speaker of the greeting, which translates to 'I welcome you!' is ambiguous and could be the cup itself, the figure, or the wine. Other inscriptions associated with vat scenes are the more typical 'Ο ΠΑΙΣ ΚΑΛΟΣ', 'The boy is beautiful', type.<sup>11</sup> Both inscriptions celebrate the convivial and social aspects of the Greek symposium.

The vessel in which the treading figure stands also varies, but it is always a large vat-like receptacle sufficiently sized to accommodate a boy or adult.<sup>12</sup> In some cases the vessel looks like a bell krater or large utility basin, a lug-handled lekane, but it is important to remember that the vase painters were not interested in conveying literal reality.<sup>13</sup> For tondo scenes, the painters frequently truncated the vessel in order to provide enough room for the human figure, which was the most important element of the design. The vessel should not necessarily be understood as sunken into the earth as a pithos might be, although similar lekane-like vessels appear to be sunken into the ground on more elaborate vintage scenes in both black and red figure on the exterior of vessels.<sup>14</sup> Eventually, the vat will need to be emptied and cleaned, which may be represented in the series of scenes with profile figures leaning into or over in the vat.<sup>15</sup>

In Sparkes' review of the development of vintage scenes, he notes that red-figured scenes such as figures 1 and 2 occur around 500 BC, but contemporary and slightly earlier black-figured painters depicted a different winemaking process.<sup>16</sup> In the black figure tradition satyrs usually perform a condensed version of the vintage by picking the grapes, crushing them in a basket, and collecting

the fresh wine (the must) in a trough or vat (*fig. 3*).<sup>17</sup> Dionysos and other satyrs often move in to enjoy the quickly fermenting fresh wine. Henry Immerwahr also noted the difference between vintage scenes in Archaic Attic black figure and red figure vase painting, and he explicitly associated the black-figured treading scenes with white wine production and the red-figured vat scenes with red wine.<sup>18</sup> In the black-figured images, the satyrs tread grapes in a wicker basket placed on a pressing board with a spout. The grape skins, stems, and leaves (the pomace or marc) are filtered out by the basket, thus producing a white wine must, or a must that is not deeply colored by contact with grape skins, which are what give red wine its color and taste.<sup>19</sup> On figure 3, an amphora attributed to the Amasis Painter, a further straining vessel sits in the mouth of the vat to prevent large particles from entering the white wine must.<sup>20</sup>

Most commentators describe the action in the red-figured kylix vat scenes as treading grapes, and by this they imply the initial stage of crushing the grapes fresh from the fields (the crush).<sup>21</sup> In contrast to the black-figured scenes, the vat in the red-figured cup scene is not depicted with an outlet or any indication of straining. Processing in which the must is not strained and stays in prolonged contact with the marc produces deeper red wines.<sup>22</sup> Of course, depictions with a truncated or recessed vessel mean that an outlet may not be shown. Nevertheless, the emphasis in the red-figured cup tondo scenes is on the stomping, not straining.

Both red and white wines are known from



*Fig. 3. Attic black-figured amphora. Antikenmuseum Basel und Sammlung Ludwig, inv. KA 420 (Photo Andreas F. Vogelin).*

ancient Greece, mainly through the analysis of terms used to describe their color.<sup>23</sup> In theory, chemical analyses can distinguish white wine from red wine since the red wine fermentation process introduces distinctive chemicals resulting from the interaction of the alcohol and skins.<sup>24</sup> Unfortunately, ancient wine normally does not survive in a condition suitable for scientific analysis, but chemical analysis of wine stored in the tomb of Tutankhamun was able to identify the presence of both red and white wines.<sup>25</sup> Scenes from Egyptian tombs as early as the Old King-

dom also depict the process of crushing and straining grapes, and decanting the must into vessels.<sup>26</sup> It is possible to produce both white and red wines from the same grape variety,<sup>27</sup> and scholars recognize both in the tomb imagery.<sup>28</sup> If the first free run juice from crushed grapes is strained, it will produce white wine. Not straining the crushed grapes and allowing the must to stay in contact with the marc will produce red wine. Eventually, after fermenting, the marc will be strained out of the red wine. A flow chart of grape processing for red and white wines appears as figure 4.<sup>29</sup>

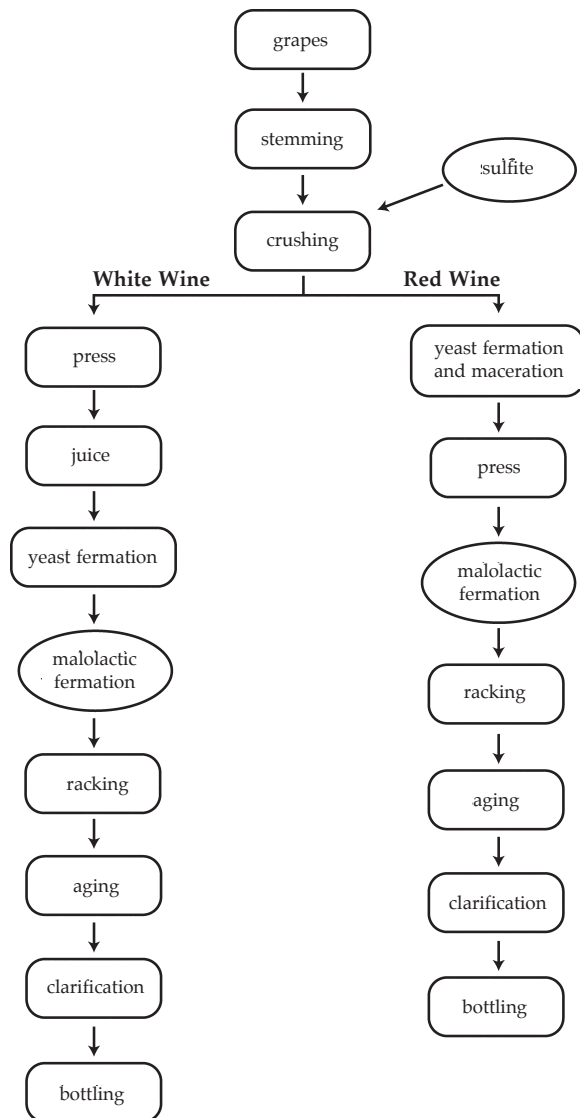


Fig. 4. Flowchart describing the steps for producing white and red wines (author after Hutkins 2006, fig. 10-3).

In red wine processing the must is allowed to sit and begin natural fermentation in a phase called maceration, and the length of maceration will affect the robustness and flavor of the wine owing to the extraction of tannins and phenolytic compounds from the marc.<sup>30</sup> The ideal maceration length is temperature dependent, but for red wine it is about eight days, after which the wine loses color and becomes bitter.<sup>31</sup> The fermentation process during maceration gives off carbon dioxide (CO<sub>2</sub>). In fact, for every liter of wine, 40 liters of carbon dioxide is eventually produced.<sup>32</sup> During maceration carbon dioxide pushes some of the marc up to the surface of the must forming a cap. A mechanical process called pigeage stirs the fermenting wine, punching the cap of skins back down in order to put as much of the must in contact with the marc as possible.<sup>33</sup> Since carbon dioxide builds up under the cap, disturbing the cap releases the gas.<sup>34</sup> Some modern vintners use machines to perform the pigeage, but in pre-industrial and traditional wine processing, humans did the punching by pushing the cap down with their feet and churning the must with their bodies. Deeper red wines such as Cabernet Sauvignon, Pinot Noir, and Merlot are more likely to use manual pigeage.

A pigeage treader, being so close to the surface of the wine, can become asphyxiated by the carbon dioxide gas released from under the cap.<sup>35</sup> In a description of a mid 20<sup>th</sup> century French vintage, Don and Petie Kladstrup emphasize the danger the carbon dioxide posed to the treaders:

After picking, grapes were crushed with bare feet. The must, or grape juice, was then poured into giant vats, followed by a process called pigeage, in which naked workers plunged themselves into the frothy liquid. Holding tightly to chains that had been fastened to overhead beams, the workers would then raise and lower themselves over and over again, stirring the must with their entire bodies so as to aer-



ate the mixture and enhance the fermentation. It was a dangerous exercise. Hardly a harvest went by without some workers losing their grip and drowning, or being asphyxiated by the carbonic gas [CO<sub>2</sub>] given off by the fermenting juice.<sup>36</sup>

Even today, winemakers practicing this traditional form of manual pigeage can be overcome and die from asphyxiation caused by carbon dioxide.<sup>37</sup> Short of death, excessive inhalation of the gas would leave the treader lightheaded. Carbon dioxide is currently present in the atmosphere at 393 ppm,<sup>38</sup> but it is not uncommon for poorly ventilated, crowded rooms to reach 2000-5000 ppm CO<sub>2</sub>.<sup>39</sup> Lightheadedness occurs at concentrations of 2000 ppm, and loss of consciousness may begin at 11000 ppm.<sup>40</sup> Being about 1.5 times denser than air, the carbon dioxide would collect close to the surface.

The loops and grips depicted in the red-figured scenes take on new importance in the light of the effects of carbon dioxide during pigeage. They would not only provide stability for treading in a round-bottomed vessel, but they would also provide a safety measure if the treader began to lose consciousness. Yet, in black-figure grape crushing scenes, satyrs also hold onto loops or vines during the crush to keep their balance in the slippery basket.<sup>41</sup> Thus, the stability loops alone are not conclusive evidence for pigeage and red wine processing. Instead, the context of their use in the scene must be considered.

It is not possible to use the vase painting images to characterize changing tastes and trends in wine preference. Sparkes' study showed that black-figured, white wine vintage scenes gave way to the red-figured, red wine pigeage scenes around 500 BC, but 25-50 years later scenes on red-figured kraters return to depicting white winemaking.<sup>42</sup> In fact, some of the red-figured kraters seem to feature both kinds of pressing: strained and unstrained (fig. 5).<sup>43</sup> At left of figure 5 two satyrs make white wine. One brings the fresh grapes, the other crushes them and strains the must through a wicker basket. To the right, a satyr treads red wine in a vat in the pose familiar from the red-figured kylikes. Dionysos with his kantharos observes from the far right, ready for a sample. It would be nice to argue that the popularity of the red-figured depictions of red wine making corresponded with a sudden popularity of red wine, but this conclusion is otherwise unsupportable.

Ancient authors and modern scholars of ancient

viniculture have not discussed pigeage as a stage in the processing of red wine.<sup>44</sup> Nor are there clear ancient Greek literary references to maceration, but literary references to light and dark wines imply that wines in a range of colors existed, and darker wines could only be produced through maceration.<sup>45</sup> Roman authors, on the other hand, provide detailed instructions for successful wine-making.<sup>46</sup> Cato the Elder recommended a maceration period of 30 days (*De Agri Cultura* 26). However, his grapes had been pressed and strained so that the amount of marc in the must was minimal. Still, some marc must have made it into the maceration jars because he instructs the vintner to 'draw off the wine from the lees,' before sealing the jars.

In late 6<sup>th</sup> to early 5<sup>th</sup> century BC red-figure depictions, the pigeage scene only appears in the tondo of kylikes rather than on the exterior of amphoras and kraters. The circular field is particularly suitable for the shape of the vat and the disposition of the figure's limbs. Images of Dionysos and winemaking are natural subjects for decorating symposium vessels, as it was the god's power and his gift that defined the sympotic evening. The pigeage scenes take the allusion to another level. Their location in the tondo of kylikes supplied a metaphor for the experience of the drinker himself. The kylix shape had only one intended use - to hold wine in the symposium. Even though ancient Greek wine was cut with water, it was opaque with particulates, not translucent.<sup>47</sup> As the drinker drained his cup, the image in a kylix's tondo would appear slowly, and darker red wines would heighten this effect. Thus, tondo scenes sometimes have a consciously revelatory

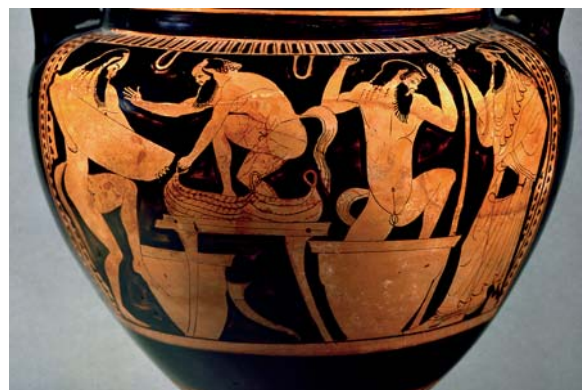


Fig. 5. Attic red-figured krater. Naples, Museo di Capodimonte 960 (Photo courtesy Soprintendenza Speciale per il PSAE e per il Polo Museale della città di Napoli).

iconography. Scenes may sum up or extend the meaning of the imagery on the exterior of the cup; other times they allude to the narrative consequences of the exterior imagery. And sometimes the imagery was humorous and emphasized the effects of drinking too much alcohol.<sup>48</sup> The more the symposium drinker drank, the more his state of consciousness resembled the youth doing the pigeage. The scene is probably providing a humorous metaphor for drunkenness, but it could also be read as being a more serious reflection of the transformative power of wine. Like the youth stomping down the cap, it was important not to cross the line between consciousness and unconsciousness.<sup>49</sup>

In conclusion, this brief re-examination of vintage scenes emphasizes the importance of considering the iconographic and cultural context of the vases. Only by comparing the scenes within the tradition of black- and red-figured vases can we understand that the vases depict different types of winemaking. The red-figured pigeage scenes within the tondo of kylikes must also be understood both in the context of other vintage imagery and within the context of the symposium.

## NOTES

- \* I am grateful to Patrick McGovern, Kathy Merchant, Holt Parker, and Stephen Matter for discussing aspects of this project with me, but it was Ann Santen, who appreciates both wine and pottery, who introduced me to the pigeage process. For permission to publish the red-figured kylix from the Agora excavations (fig. 1) and for his support and encouragement, I thank excavation director Dr. John McK. Camp II. For help acquiring figure 5, I thank Bice Peruzzi. Helpful comments from the anonymous reviewers improved this article.
- <sup>1</sup> Sparkes' article was also prompted by an earlier article by Jaap Hemelrijk in the journal: Sparkes 1976, 47; Hemelrijk 1974, 125-128, 152-155, figs 1, 19-25. See Hemelrijk 1974, 152-155 for a further discussion of the vintage equipment depicted in the black-figured scenes.
  - <sup>2</sup> Sparkes 1976.
  - <sup>3</sup> Sparkes 1976, 52-53.
  - <sup>4</sup> Agora P 32419; Lynch 2011, 234-235, no 91, figs. 23, 123; Camp 1996, 250, no 30, fig. 8, pl. 74. Note that the transcription of the inscription published in Camp 1996 is incorrect. See Lynch 2011, fig. 123d for a facsimile.
  - <sup>5</sup> Cf. Boston MFA 24.453, ARV<sup>2</sup> 129, no 28 (unattributed, signed Pamphaios Potter), Immerwahr 1984, no 43, pl. 44, where an adult male grabs a single loop descending from the tondo border.
  - <sup>6</sup> In the tondo of a red-figured kylix from Taranto associated with the Euergides Painter a similar youth treads grapes with one arm up with a clenched fist, and one arm down with an open hand, Taranto, Vinc. 108/2, CVA Taranto 4, pl. 22 (3189):2. (In the text to the plate the subject is described as an athlete bathing.) The clenched fist does not appear to hold anything, but it

is positioned similarly to the hand of the figure on the Boston kylix (fig. 2 here), which grasps a loop.

- <sup>7</sup> E.g., London, Victoria and Albert Museum 4807.1901, ARV<sup>2</sup> 89, no 14, Sparkes 1976, fig. 15, attributed to the Euergides Painter.
- <sup>8</sup> Rouillard 1975, 41-43, fig. 8, Castle Ashby, ARV<sup>2</sup> 91, no 50, and drawing, 'Schema B.'
- <sup>9</sup> Robertson 1992, 75-76.
- <sup>10</sup> ARV<sup>2</sup> 103-104.
- <sup>11</sup> E.g., Ann Arbor, Kelsey Museum 70.1.1, ARV<sup>2</sup> 1593, mentioned under 37, Sparkes 1976, 61, fig. 17.
- <sup>12</sup> See Robertson 1992, 75-76 for his hypothesis that lekanai used for winemaking in turn inspired the shape of bell kraters. In fact, the Kleophrades Painter painted a vintage scene on an early red-figured bell krater: Basel, once Cahn private collection, now Antikenmuseum und Sammlung Ludwig BS482, ARV<sup>2</sup> 1632, no 49 bis, Add<sup>2</sup> 188, Sparkes 1976, 53-54, fig. 19.
- <sup>13</sup> Sparkes 1976, 50; Sparkes/Talcott 1970, 211-216.
- <sup>14</sup> See Sparkes 1976, figs 6, 12, 20, 21, 22, 24.
- <sup>15</sup> Immerwahr 1992, 126.
- <sup>16</sup> Sparkes 1976, 52-53.
- <sup>17</sup> Basel, Antikenmuseum und Sammlung Ludwig KA 420, Para 65, Add<sup>2</sup> 43; Sparkes 1976 fig. 4; CVA Basel Antikenmuseum 1, 86-87, pl. 29 (175):1-4.
- <sup>18</sup> Sparkes 1976, 53; Immerwahr 1992, 124-125, n. 17. Isager/Skydsgaard 1992, 57 consider the distinction possible, but do not insist on it. Curtis 2001, 299-300, 430 is convinced that the two processing methods result in white and red wines and goes on to say that 'The production of both red and white wines, therefore, may be a Greek innovation to food technology'; however, the analysis of wine from the tomb of Tutankhamun now confirms that Egyptians produced both red and white wines, see Guasch-Jané et al. 2006.
- <sup>19</sup> Curtis 2001, 378.
- <sup>20</sup> Sparkes 1976, 49.
- <sup>21</sup> Some scenes were originally associated with bathing, but Ginouvès 1962, 51-54 states that when the youth is inside the vat, treading grapes is a more likely interpretation. Immerwahr 1992, 124-12 n. 15 also reviews different interpretations.
- <sup>22</sup> Hutkins 2006, 372.
- <sup>23</sup> Dalby 2003, 352-353. Pliny describes Roman wines as ranging from white to black, HN 14.80.
- <sup>24</sup> Hutkins 2006, 359-360, 363; Jackson 2008, 281-294. Archaeobotanical studies of the botanical remains from the production of wine may be able to contribute to the determination of red or white by characterizing the botanical waste produced by stages in the process, Margaritis/Jones 2006.
- <sup>25</sup> Singleton 1995, 69-70; Guasch-Jané et al. 2006.
- <sup>26</sup> Lerstrup 1992, 65, 70-72; Curtis 2001, 148-150, 154-160; James 1995, 206-207. In some tombs, the sack pressing comes after the depiction of treading grapes, therefore it is clear that it is a second pressing.
- <sup>27</sup> E.g., Zinfandel grapes can produce a robust red or white-rose wine; Sullivan 2003, 126 and passim.
- <sup>28</sup> Curtis 2001, 153 discusses the possibility of dual production of red and white wines in ancient Egypt; the sack pressed must might have been a darker color and mixed with the lighter first pressing, 378.
- <sup>29</sup> Redrawn after Hutkins 2006, 365, fig. 10-3.
- <sup>30</sup> Hutkins 2006, 366; Coates 2008, 24; Jackson 2008, 336-340.
- <sup>31</sup> Ribéreau-Gayon et al. 2006, 348-349; Jackson 2008, 339 explains factors affecting the length of maceration, 357,

- and the graph in fig. 7.13 illustrates the optimum length of maceration for extraction.
- <sup>32</sup> Grainger/Tattersall 2005, 50.
- <sup>33</sup> Punching down the cap helps cool the fermenting must, control pH through release of potassium, and promote rapid extraction of anthocyanins: Jackson 2008, 352.
- <sup>34</sup> Hutkins 2006, 374.
- <sup>35</sup> Johnson 1999, 124, without citation, refers to Medieval parish records of death by suffocation during red wine processing.
- <sup>36</sup> Kladstrup/Kladstrup 2001, 17-18.
- <sup>37</sup> 'Two French Wine-Makers Suffocated by Carbon Dioxide Fumes from the Grapes they were Treading,' 6 November 2008, *Mail Online (The Daily Mail (UK))*, <http://www.dailymail.co.uk/news/worldnews/article-1083623/Two-French-wine-makers-suffocated-carbon-dioxide-fumes-grapes-treading.html>. A winery worker in Switzerland also died from carbon dioxide poisoning, but not during the pigeage, Guillemin/Horisberger 1994.
- <sup>38</sup> Data from US National Oceanic and Atmospheric Association, Earth System Laboratory: <http://www.esrl.noaa.gov/gmd/ccgg/trends/> (accessed 13 April 2011).
- <sup>39</sup> Studies have focused on classrooms with active students, e.g., Daisey/Angell/Apte 2003, and consistently show that when CO<sub>2</sub> levels exceed the recommended 1000 ppm threshold, cognitive abilities diminish.
- <sup>40</sup> Langford 2005, 230-231.
- <sup>41</sup> Isager/Skydsgaard 1992, 57 interpret loops descending from tondos or panel borders as indicating the pressing is occurring indoors. Vase painters generally did not use visual cues to establish setting, nor were they interested in faithful representation of reality. In fact a black-figured treader holds on to the upper border of a scene on an unattributed black-figured amphora, Brussels R 278, Sparkes 1976, fig. 12. Similar loops descending from a crossbar appear in Egyptian tomb paintings of the crush, see Curtis 2001, 151, and n. 31, figs 11 and 12.
- <sup>42</sup> Sparkes 1976, 54-56.
- <sup>43</sup> Naples, Museo di Capodimonte 960, ARV<sup>2</sup> 563, no 4, *Para* 389, *Add<sup>2</sup>* 260, attributed to the Pig Painter, Sparkes 1976, 55, fig. 25; see also Sparkes 1976, figs 24 and 26.
- <sup>44</sup> Johnson 1999, 73 rightly states that ancient Greek and Roman vintners did not age their wines in wooden barrels, but he implies that full-bodied reds created through extended maceration were also not known. Allen 1961, Unwin 1991, McGovern/Fleming/Katz 1995, and McGovern 2003 do not mention evidence for pigeage, and McGovern (pers. comm. 26 August 2010) said he was unaware of discussions of or evidence for ancient pigeage. Margaritis/Jones 2006 present an ethnographic and scientific study of both white and red wine production, but do not discuss the pigeage process.
- <sup>45</sup> Dalby 2003, 352; Curtis 2001, 300. Curtis 2001, 153 suggests that some Old Kingdom Egyptian depictions of the vintage may imply maceration and the production of 'rather strong red wine,' but the otherwise detailed Egyptian scenes do not depict the pigeage.
- <sup>46</sup> Comparable Greek agricultural handbooks did exist but do not survive. A 6th century AD Latin agricultural manual, *Geoponica*, includes references to older Greek texts. See Curtis 2001, 297, n. 75. For a well-illustrated guide to Roman winemaking, see Fleming 2001.
- <sup>47</sup> The lees present in the bottom of a kylix could be used for the game of kottabos, see Csapo/Miller 1991 and Dalby 2003, 189, figs 9-10.
- <sup>48</sup> Kylikes with scenes of the symposium or komos on the exterior sometimes feature vomiting men on the interior. The examples are numerous; e.g., a kylix attributed to Onesimos in the J. Paul Getty Museum with a komos on the exterior and a touching scene of a man vomiting while his companion holds his head, 86.AE.285, CVA Malibu 8, 27-29, fig. 11, pl. 413 (1690):1-2, 414 (1691):1-2, 416 (1693):1-2.
- <sup>49</sup> There are abundant examples of deaths attributed to excessive or rapid consumption of wine in ancient Greece. See Miller 1979, 30.

## BIBLIOGRAPHY

- ABV = Beazley, J.D. 1956, *Attic Black-Figure Vase-Painters*, Oxford.
- Add<sup>2</sup> = Carpenter, T.H. 1989, *Beazley Addenda: Additional References to ABV, ARV<sup>2</sup>, and Paralipomena*, second edition, Oxford.
- Allen, H.W. 1961, *A History of Wine*, New York.
- ARV<sup>2</sup> = Beazley, J.D. 1963, *Attic Red-Figure Vase-Painters*, Oxford.
- Camp, J. McK, II. 1996, Excavations in the Athenian Agora 1994 and 1995, *Hesperia* 65, 231-261.
- Coates, C. 2008, *The Wines of Burgundy*, Berkeley.
- Csapo, E./M. Miller, 1991, The Kottabos-Toast and an Inscribed Red-Figured Cup, *Hesperia* 60, 367-382.
- Curtis, R.I. 2001, *Ancient Food Technology*, Leiden.
- Daisey, J.M./W.J. Angell/M.G. Apte. 2003, Indoor Air Quality, Ventilation and Health Symptoms in Schools: An Analysis of Existing Information, *Indoor Air* 13, 53-64.
- Dalby, A. 2003, *Food in the Ancient World from A to Z*, London.
- Fleming, S. 2001, *Vinum: The Story of Roman Wine*, Glen Mills, PA.
- Ginouves, R. 1962, *Balanéutikè*, Paris.
- Guasch-Jané, M.R./C. Andrés-Lacueva/O. Jáuregui/R.M. Lamuela-Raventós, 2006, First Evidence of White Wine in Ancient Egypt from Tutankhamun's Tomb, *JASc* 33, 1075-1080.
- Guillemin, M.P./B. Horisberger, 1994. Fatal Intoxication due to an Unexpected Presence of Carbon Dioxide, *Annals of Occupational Hygiene* 38, 951-957.
- Grainger K./H. Tattersall, 2005, *Wine Production: Vine to Bottle*, Oxford.
- Hemelrijk, J.M. 1974, The Gela Painter in the Allard Pierson Museum, *BABesch* 49, 117-158.
- Hutkins, R.W. 2006, *Microbiology and Technology of Fermented Foods*, Ames, IA.
- Immerwahr, H. 1992, New Wine in Ancient Wineskins: The Evidence from Attic Vases, *Hesperia* 61, 121-132.
- Isager, S./J.E. Skydsgaard, 1992, *Ancient Greek Agriculture: An Introduction*, London/New York.
- Jackson, R.S. 2008, *Wine Science: Principles and Applications*, third edition, Amsterdam.
- James, T.G.H. 1995, The Earliest History of Wine and Its Importance in Ancient Egypt, in McGovern/Fleming/Katz, 197-213.
- Johnson, H. 1999, *Hugh Johnson's Story of Wine*, London [reprint].
- Kladstrup, D./P. Kladstrup 2001, *Wine and War: The French, the Nazis, and the Battle for France's Greatest Treasure*, New York.
- Langford, N.J. 2005, Carbon Dioxide Poisoning, *Toxicological Reviews* 24, 229-235.
- Lerstrup, A. 1992, The Making of Wine in Egypt, *GöttMisz* 129, 61-82.



- Lynch, K.M. 2011, *The Symposium in Context: Pottery from a Late Archaic House Near the Athenian Agora* (Hesperia Suppl. 46), Princeton.
- Margaritis, E./M. Jones. 2006, Beyond Cereals: Crop Processing and *Vitis vinifera* L. Ethnography, Experiment, and Charred Grape Remains from Hellenistic Greece, *JASc* 33, 784-805.
- McGovern, P.E./S.J. Fleming/S.H. Katz (eds) 1995, *The Origins and Ancient History of Wine*, Philadelphia.
- McGovern, P.E. 2003, *Ancient Wine: The Search for the Origins of Viniculture*, Princeton.
- Miller, S.G. 1979, Drinking Uncut-Wine...to Death: Unpublished Greek Epigram for a Youth from Ephesus, *AncW* 2, 29-30.
- Para = Beazley, J.D. 1971, *Paralipomena: Additions to Attic Black-Figure Vase-Painters and to Attic Red-Figure Vase-Painters*, second edition, Oxford.
- Ribéreau-Gayon, P./D. Dubourdieu/B. Donèche/A. Lonvaud 2006, *Handbook of Enology 1. The Microbiology of Wine and Vinifications*, second edition, Chichester.
- Robertson, M. 1992, *The Art of Vase-Painting in Classical Athens*, Cambridge.
- Rouillard, P. 1975, Le Peintre d'Euergidès, *RA*, 31-60.
- Singleton, V. 1995, An Enologist's Commentary on Ancient Wines, in McGovern/Fleming/Katz, 67-77.
- Sparkes, B.A. 1976, Treading the Grapes, *BABesch* 51, 47-64.
- Sparkes, B.A./L.T. Talcott. 1970, *Black and Plain Pottery of the 6th, 5th, and 4th Centuries B.C.*, (Agora Excavations XII), Princeton.
- Sullivan, C.L. 2003, *Zinfandel: A History of a Grape and its Wine*, Berkeley.
- Unwin, T. 1991, *Wine and the Vine*, London.

DEPARTMENT OF CLASSICS  
UNIVERSITY OF CINCINNATI  
PO BOX 210226  
CINCINNATI, OH 45221  
Kathleen.lynch@uc.edu

# Parthenon: 25 Centuries as a Mathematical Treatise

Roberto Brigo

## Abstract

*This grandiose temple dedicated to the goddess Athena was built as part of the programme to renew the whole Acropolis complex, in the Athens of Pericles. It is a widely held opinion that the Parthenon stands as a symbol of that era, a masterpiece of Greek artistry where architecture, sculpture and painting are blended into a wondrous whole. Its fame also comes from the repertoire of compositional modes it boasts, many of which are of remarkable complexity and richness. We can find parallels, ratios repeated again and again, and points of correspondence in the order of placement and the proportions the various parts have to each other and to the whole. On top of all this, it is also composed using various geometries and modulations designed to improve its overall interest and counteract the distortions of the human eye. The scientific foundation of the Parthenon is manifest and makes a valuable contribution to research on the early period of Greek science. Unfortunately very few texts and documents - practically none - have survived from that period; because of this it may be considered highly interesting to study the 'Parthenon book', a practical work that lets us trace a line back to the theory behind it.*

## DESCRIPTION

This essay is a contribution to research on the peculiarities that distinguish the Parthenon. These peculiarities are the result of the thought processes behind its design, created around the middle of the 5<sup>th</sup> century BC,<sup>1</sup> during one of the most important periods in the social, cultural and artistic history of Athens. Sources are very scarce and the only testimonies we have to go on come from works written in later periods; the texts and treatises with the geometrical and mathematical principles the Greeks adopted for their constructions have also been lost. Thus it is that the logic behind Parthenon can only be 'read' by examining the temple itself: it provides us with the practical applications of a theory based on perfect coordina-

tion and absolute rationality. We can arrive at the time of the temple's conception by working backwards from the visible traces that remain today, what we can see of its original design, following a unitary principle. It is a multi-faceted task and a journey that necessarily starts off from the temple's current state of repair.

The Parthenon has a history dating back over 25 centuries: it has suffered the damage caused by time and by natural and man-made disasters, yet the way its spaces are arranged and the symmetries and proportions that have remained unchanged suggest widespread adherence to the master plan. The evidence of this adherence is found in relation to the unit of measurement used: it is a constant found everywhere, from the columns to their flutings (20 per column). The measurement 0.298 metres, an architectural foot (figs 2-3), and is obtained from the diameter of the column bases. This constant allows us to continue with our measurements until we have built up a number of repertoires, including an arithmetical one containing several whole numbers<sup>2</sup> - numbers that made construction work easier by facilitating communication between the various workers. It is interesting to note, as we follow the trail of geometric lines, that many parts display an incredible precision of construction in their measurements and proportions: the tolerance is often as low as 1/1000, in some areas even less. Thus we find ourselves having already entered the sphere of geometrical study, equivalent ratios and deliberate design: the Parthenon is certainly the prod-



Fig. 1. Parthenon, east front.

uct of architectural creativity expressed within the confines of a process of mathematical logic.

Many studies and treatises have been written on the subject of proportionality and on the use of perspective in architectural plans and sculpture from the very earliest days of Greek art, but we know next to nothing about these works. In *De Architectura*, Vitruvius cites the text about the Parthenon written by Iktinos and Karpion<sup>3</sup> but gives no idea as to its content. All we have are the legible parts of the temple itself: the arrangement of its spaces, its arithmetic and its proportions. Plus a known constant: the ratio of 4 : 9 that ties the various components of the temple together. The drawing in fig. 4 gives us the ratio between the breadth and length of the stylobate. Other studies have pointed out various examples of the ratio 4 : 9, between the height and breadth of the building, between the breadth and length of the *sekos* (cella + opisthodomos), between the side of the opisthodomos and the corresponding side of the cella, and in the upper part between the *geison*, the frieze and the architrave (*epistyle*). On the floor plan (stylobate), as well as the ratio 4 : 9 we can see the number of columns, their position and in particular the number of axial intercolumniations (*i*). Along the breadth of the building there are 5, plus 2 at the corners that each measure 1.1 x *i*. Therefore we obtain:

$$5 + 1.1 + 1.1 = 7.2 \quad 7.2 : 5 = 1.44^4$$

Along the length the figures are:

$$14 + 1.1 + 1.1 = 16.2$$

The ratio of these axial intercolumniations is 4 : 9, the same as the ratio between the breadth and length of the stylobate. The equivalence is expressed thus:

$$7.2 : 16.2 = 4 : 9$$



Fig. 2. Parthenon, external Doric column.

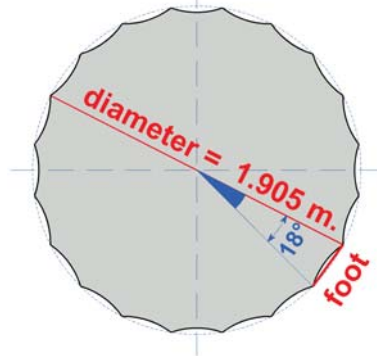


Fig. 3. Parthenon, section of Doric column base.

This is a modern way of expressing equivalences; we do not at present know what signs or symbols were used to denote them at that time. We can imagine geometrical figures drawn with ruler and compass, coupled with directions intended principally to clarify practical issues. The equivalence above is one of the many theoretical expressions we can glean from a work of architecture. Considering that the work was created during the early period of Greek mathematics,<sup>5</sup> we can point out two characteristics it displays:

- Equivalent ratios used for decimal and whole numbers;
- Equivalent ratios used for different entities: i.e. segments and numbers.

With the other ratios of 4 : 9 that can be found and with the equivalence

$$7.2 : 16.2 = 4 : 9$$

the various sizes can be expressed as a series of equivalences of this kind:

$$A : B = C : D = E : F, \text{ etc. etc.}$$

This is a form of representation that refers to a scientific text written after the construction of the Parthenon: Euclid's *Elements*.<sup>6</sup> Reference to the previous equivalence, for example, can be found in Euclid 5.11.<sup>7</sup>

By utilizing simple ratios (which became an integral part of the work), the designer of the temple created a certainty underpinning the multiplicity and variety of the vast project he had embarked on. The ratios of the various parts lead us to the relationships, analogies, intervals and, through geometrical similarities and numerical calculations, to the proportions between the figures. One of the geometrical figures we find is the triangle (*fig. 5*). If we analyze the triangle OCD, we can see the proportionality of its segments and its areas. The proportion of the segments to each other is described in Euclid 6.2;<sup>8</sup> in this case the triangle OCD is cut by the segment EF parallel to CD giving us:

$$OE : EC = OF : FD$$

$$\text{and also } OC : OE = CD : EF$$

from which we obtain

$$CD : OC = EF : OE.^9$$

Continuing our examination of the triangle OCD, we get the proportion of the areas to each other:

$$OCD : OEF = 1.44^2$$

Further Propositions and complementary forms



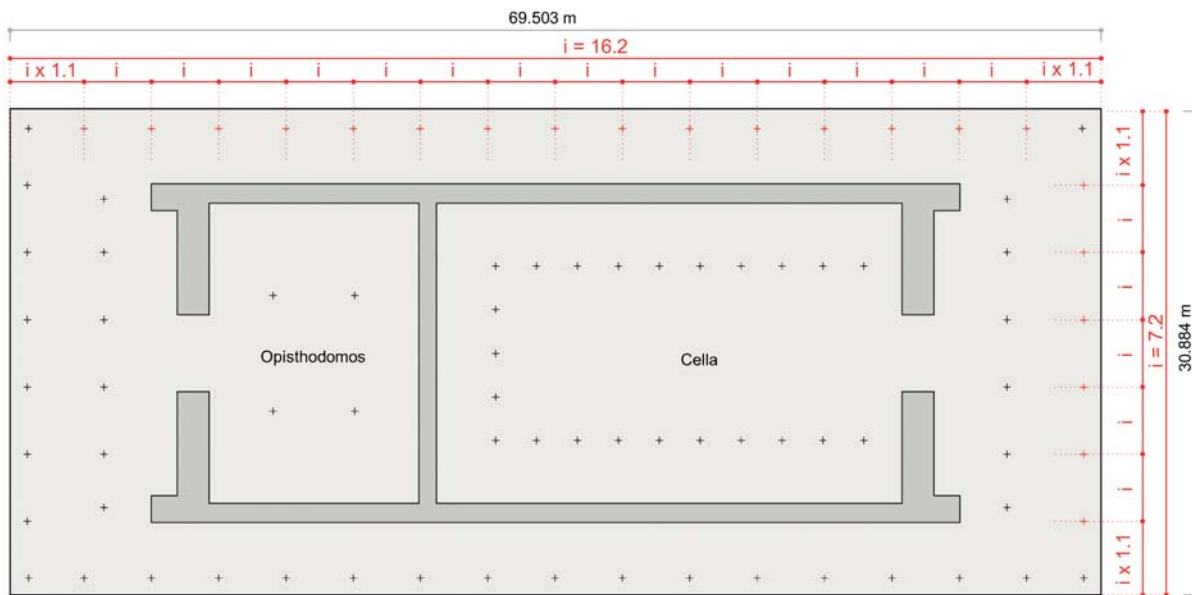


Fig. 4. Parthenon, floor plan of the stylobate with position of columns.

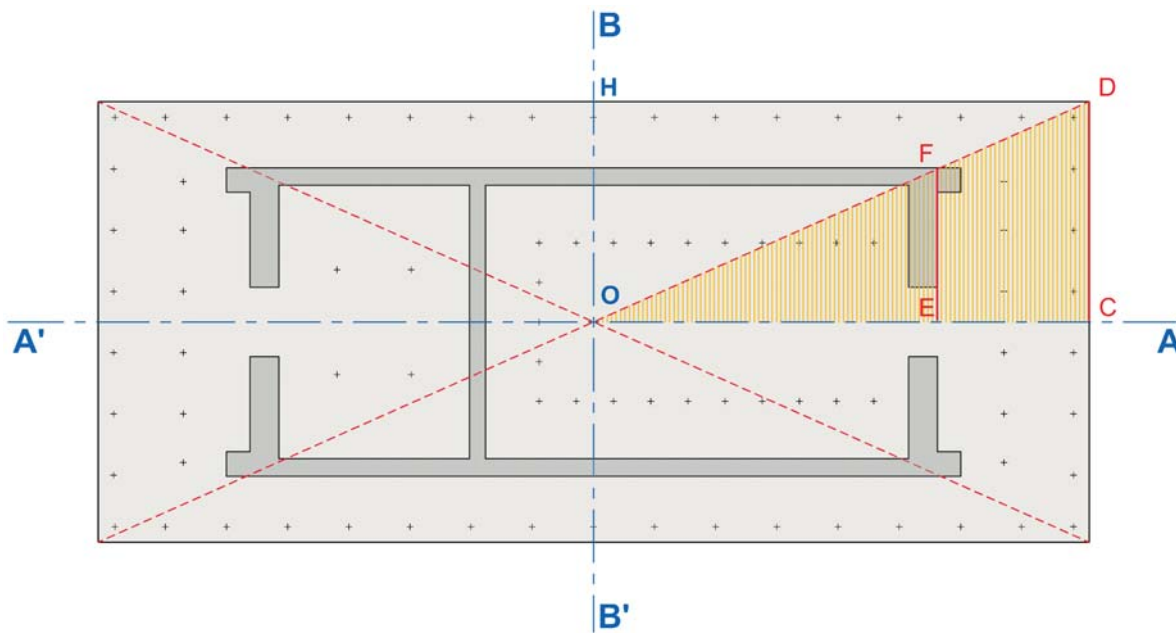


Fig. 5. Parthenon, triangles in the stylobate.

for triangles are formulated in Euclid 1.38; 5.7 and 6.1. From the drawing (fig. 6), we can also find part of the proportion that connects horizontal and vertical sizes:

$$a : b = b : c^{10} \text{ (Euclid 6.17)}$$

Book 6 applies the theory of proportions to plane

geometry. In the stylobate we can examine the rectangles OEFG and OCDH, which feature the constant 1.44. The area of the first rectangle is equal to  $OE \times EF$  while the area of the second is as follows:

$$(1.44 \times OE) \times (1.44 \times EF) = 1.44^2 \times OE \times EF.$$

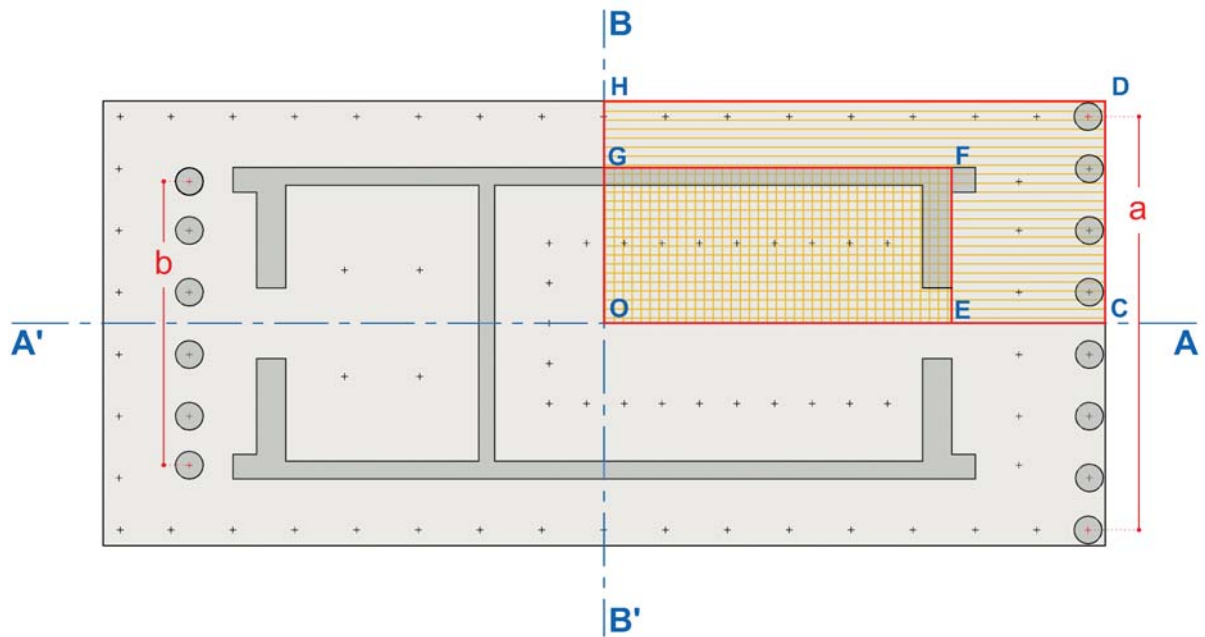


Fig. 6. Parthenon, rectangles in the stylobate.

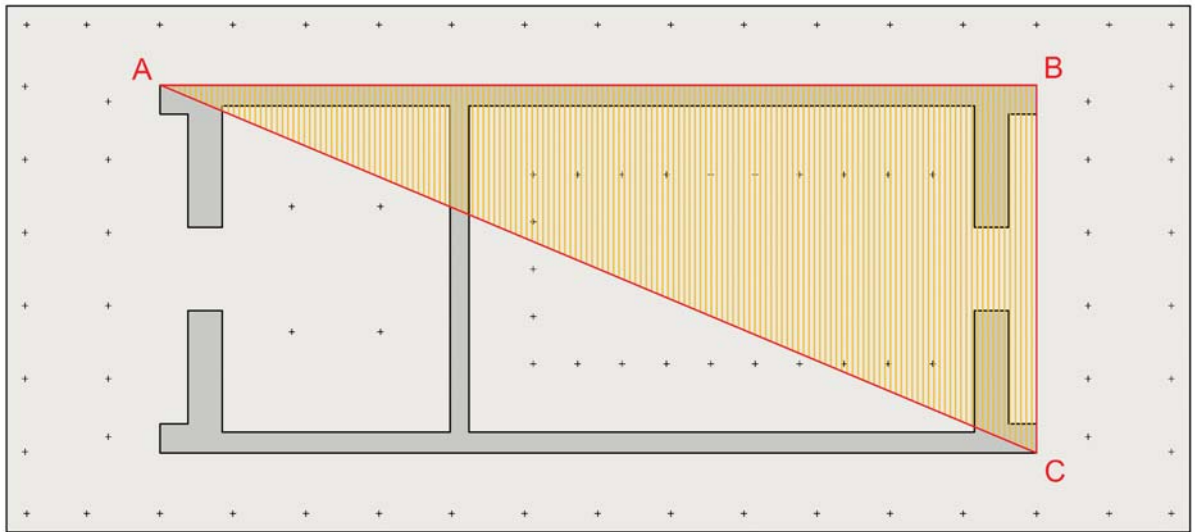


Fig. 7 Parthenon, triangle in the sekos.

The perimeters of the two rectangles also contain the constant 1.44 in their mutual proportions: the perimeter of the rectangle OEFG is 234 feet long, while the perimeter of the rectangle OCDH is 234 x 1.44 feet long. The other geometrical figure derived from the alignment of architectural elements and various practical concerns is the triangle ABC in the *sekos* (fig. 7). The dimensions come from the alignment of the *sekos* perimeter with the

axial intercolumniations of the external columns: 5 axial intercolumniations along the line BC and 12 along the line AB. They are: BC = 5, AB = 12, AC = 13, i.e. the 5,12,13 Pythagorean triangle.<sup>11</sup> Other 5,12,13 triangles can be found by tracing lines between the columns at the front of the opisthodomos (fig. 8).<sup>12</sup> In this case the alignment of the columns with other fixed points is freer, therefore the choice of the three triangles appears

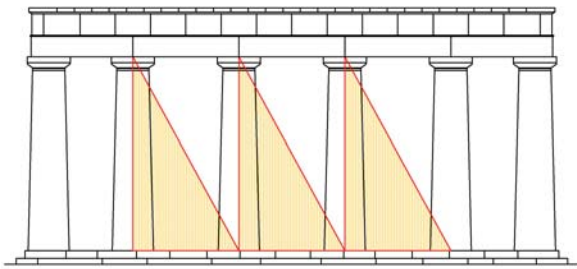


Fig. 8. Parthenon, columns on the front of the opisthodomos.

to be a key concept in the building's design. The high degree of accuracy in both height and breadth, which comes extremely close to perfect precision, lead us to a definition of the three Pythagorean triangles based more on theory than

on practice, although it is impossible to determine the precise relationship between the two.

Through proportions and geometry we can arrive at arithmetic (understood as number theory);<sup>13</sup> the Parthenon once again bears witness to this fact. The numbers that can be found appear to be the result of various mathematical calculations made in the design phase, among which we find numerical calculations.

Among the features worth noting is the equivalence of the relationship between the total height (a), the axial intercolumniations (b), the height up to the geison (c) and the height of the tympanum (d).<sup>14</sup> A comparison of the measurements reveals the equivalence  $a : b = c : d$ .

From fig. 9 we can see that the various sizes can be given in terms of a number of parts:

$$a = 20; b = 5; c = 16; d = 4.$$

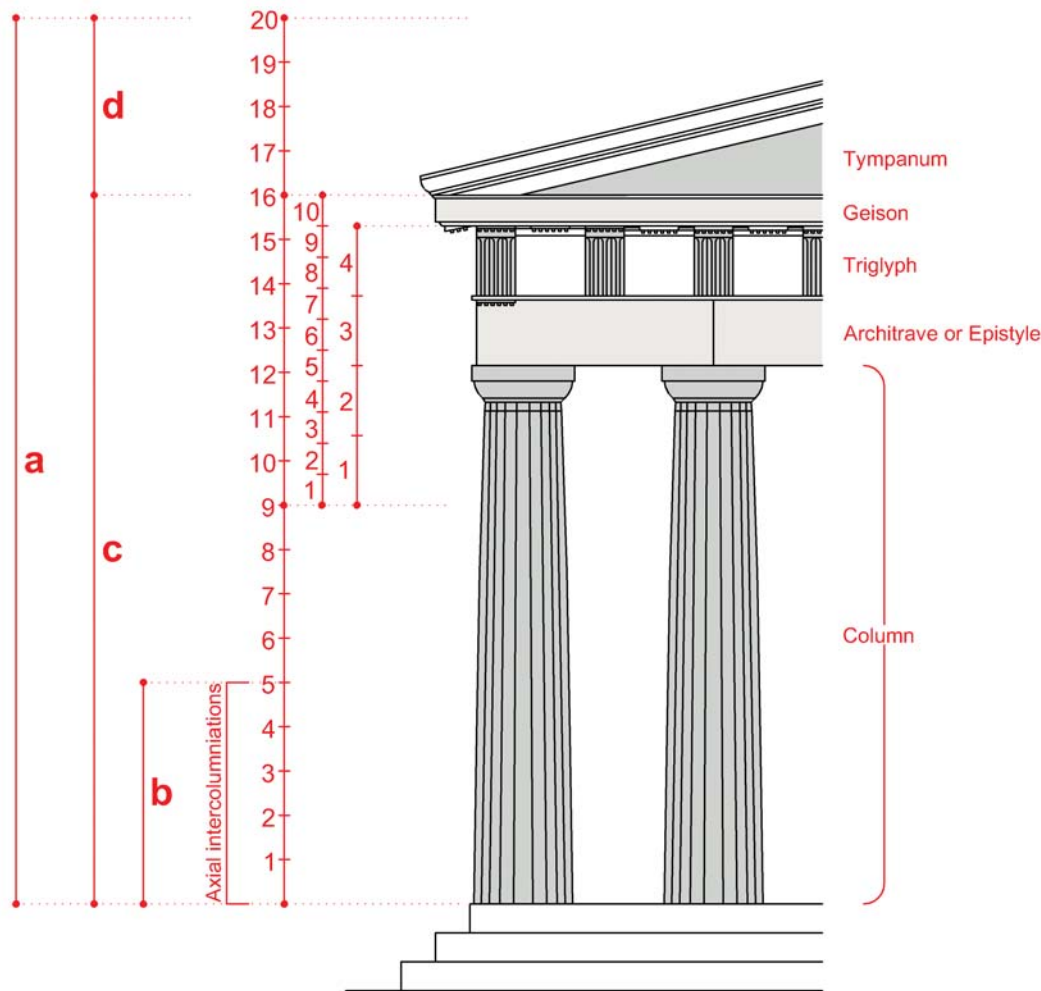


Fig. 9. Parthenon, vertical architectural elements with partitions.



'If four numbers be proportional, the number produced from the first and fourth will be equal to the number produced from the second and third; and, if the number produced from the first and fourth be equal to that produced from the second and third, the four numbers will be proportional' (Euclid 7.19), one of the fundamental theorems of the theory of proportions,  $a : b = c : d$  therefore  $ad = bc$  (Heath 1956, II, 318-320). This is backed up in Euclid 6.16 for segments of straight lines. The following equivalences can be obtained:  $ac : ad = c : d$  (7.17),  $ac : bc = a : b$  (7.18), from which we obtain  $ac : bc = ac : ad$  (5.7).

In these equivalences the quotient is 4: based on this number, a simple design is obtained that becomes a body of practical, agile and precise knowledge. Certain other architectural features also have proportions of mathematical interest: the *sekos*, the stylobate, the cella and the height up to the *geison*.<sup>15</sup> If we take Euclid 7.13,<sup>16</sup> we find the following:

$$(a+c) : (b+d) = a : b \text{ (5,12)}$$

$$(a-b) : (c-d) = a : c \text{ (5,19)}.$$

The proportions of the measurements to each

other can be represented by the proportions of segments to each other, and  $a:b$ ,  $c:d$  and  $e:f$  correspond to the ratio of the whole numbers 25:16, therefore we have:

$$a : b = (a+c+e) : (b+d+f) - \text{Euclid 5, Definition 5.}$$

The segments a-b-c-d-e-f represent horizontal and vertical, internal and external elements of the temple and they are all interconnected. Just as the proportions, the geometrical figures and the symmetries mentioned above, these measurements also highlight the fact that the architecture of the Parthenon was guided by a proportion-generating principle that shaped both its visible form and its conceptual quality.

Remaining in the field of arithmetic, another concept to be remembered is that of figurate numbers.<sup>17</sup> This time let us compare the height of the front up to the *geison* with the breadth of the stylobate: they correspond to 16 and 36 parts respectively (fig. 10). Following Euclid 7, Definition 16, we can call them plane numbers, with links between these numbers and the rectangles:

$$16 = 8 \times 2 \text{ and } 36 = 12 \times 3$$

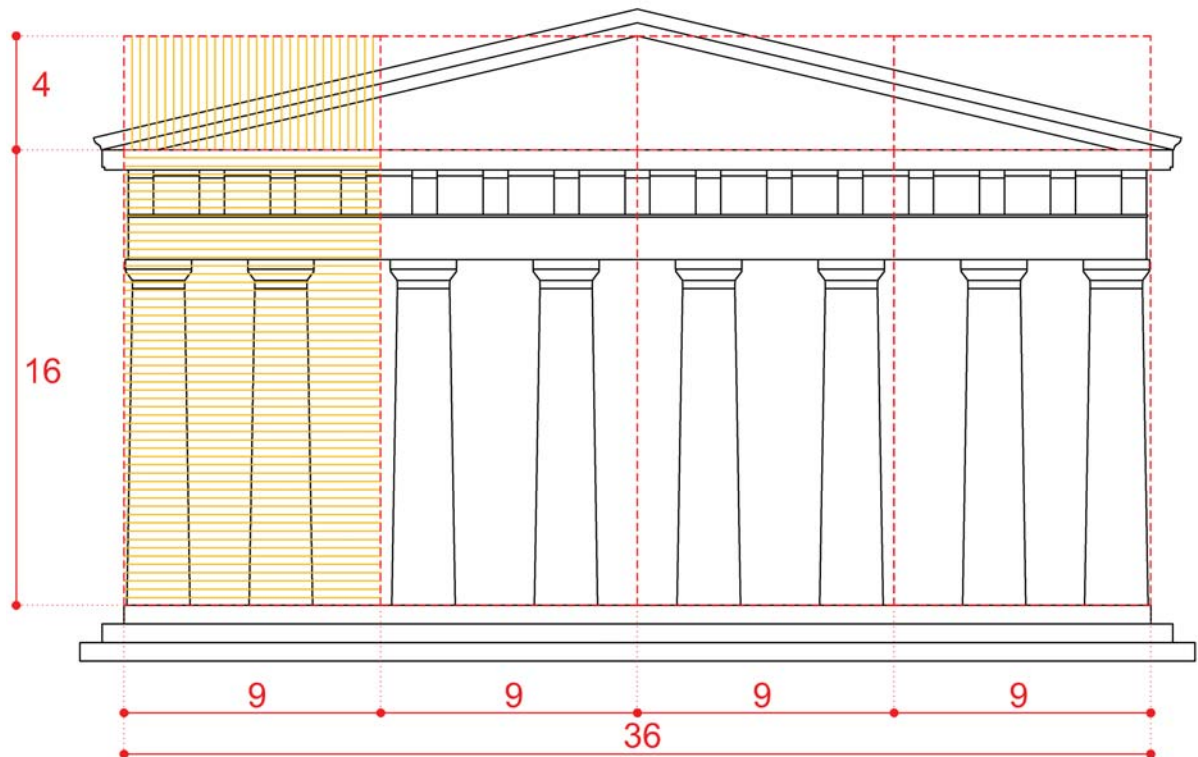


Fig. 10. Parthenon, front showing partitions.



*Fig. 11. Parthenon, north-east corner showing slight curving.*

The numbers 16 and 36 are similar because the sides 8 and 2 on the one hand and the numbers 12 and 3 on the other are proportional:

$$8 : 12 = 2 : 3.$$

The same operations can be carried out taking the number 36 again and the number 81 (the length of the stylobate). They are similar numbers because the sides 18 and 2 on the one hand and 27 and 3 on the other are proportionate:

$$18 : 27 = 2 : 3.$$

The numbers of the front and the side form the equivalence:

$$16 : 36 = 36 : 81, \text{ therefore } 81 \times 16 = 36^2 \\ (\text{Euclid 6.17}).$$

The compositional repertoire of the Parthenon displays other arithmetic peculiarities, with fractions, multiples and submultiples. These are concepts deriving from a practical body of knowledge, an architectural essay that plays a significant part in the system of induction and deduction in vogue in 5<sup>th</sup>-century Greek culture.<sup>18</sup>

Among the problems faced by the designer were those relating to visual perception. These are

problems relating to vision and perspective that arise from the mechanisms of sight (the eye, vanishing points, apparent convergence and curving of parallel lines as well as other distortions of human sight) resolved through thoroughly thought-out and patiently constructed deviations from the guiding lines, on one side or the other: redistributions of volumes in space aimed at achieving an impression of harmony and perfection.<sup>19</sup> These are peculiarities that distinguish various Greek temples built from the 6<sup>th</sup> century BC onwards, such as the Temple of Apollo at Corinth,<sup>20</sup> the Temple of Hera at Olympia,<sup>21</sup> the so-called Poseidon Temple at Paestum<sup>22</sup> and the Parthenon. The Parthenon provides us with an early optical device adopted for the stepped stylobate: it is higher in the centre and falls away towards the sides forming a gentle arch (*fig. 11*).<sup>23</sup> The arching of the stylobate and other devices for improving optical effects are discussed by Vitruvius in Book 3. The slight changes in plane involve a multitude of components, from the base to the tympanum, with the architrave and the frieze tying together the various lines that converge there. These devices were also used on the positioning and the geometry of the columns. The columns are set

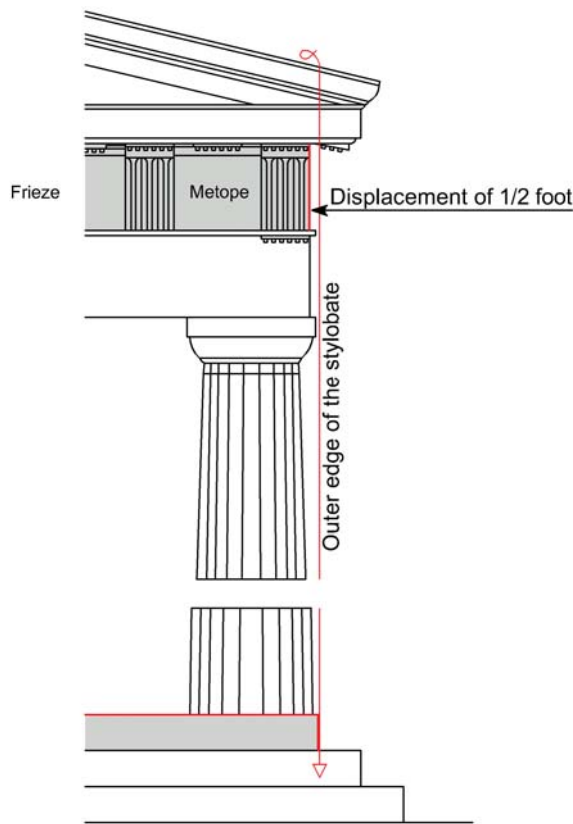


Fig. 12. Parthenon,  
frieze and architrave shifted inwards.

back slightly from the outer edge of the stylobate and lean slightly inwards;<sup>24</sup> moreover, the corner columns have a larger diameter and diagonal tilt. The columns themselves display some interesting features, such as the change in diameter, which is smaller in the upper part of the column than in the lower part, and the fact that the two parts are not joined by a straight line but by a curved line (entasis), a pleasantly gentle curve that continues from the base to the top.<sup>25</sup> Another interesting aspect concerning the form of the columns is their fluting.<sup>26</sup> The diameter of the columns with 20 flutes carved into it was mentioned in the first part of this essay: taking their diameter as a starting point, we can find the length of each side of the 20-sided polygon, which is 0.298 metres. This is a measurement from that era that has been preserved allowing us to find symmetries and proportions in the temple.

The issues of optical effects and perspective lead us to discover further references and comparisons that can highlight various different peculiarities. We can note how the designer was concerned with the issue of perspective, principal and secondary viewpoints, and the sides of the temple; he bore in mind both the internal structures that could be seen from the outside and the sculptural and decorative components, as well as the relationships between elements that the eye can perceive.<sup>27</sup> This is the mode of composing architectural designs that characterizes Attic art and

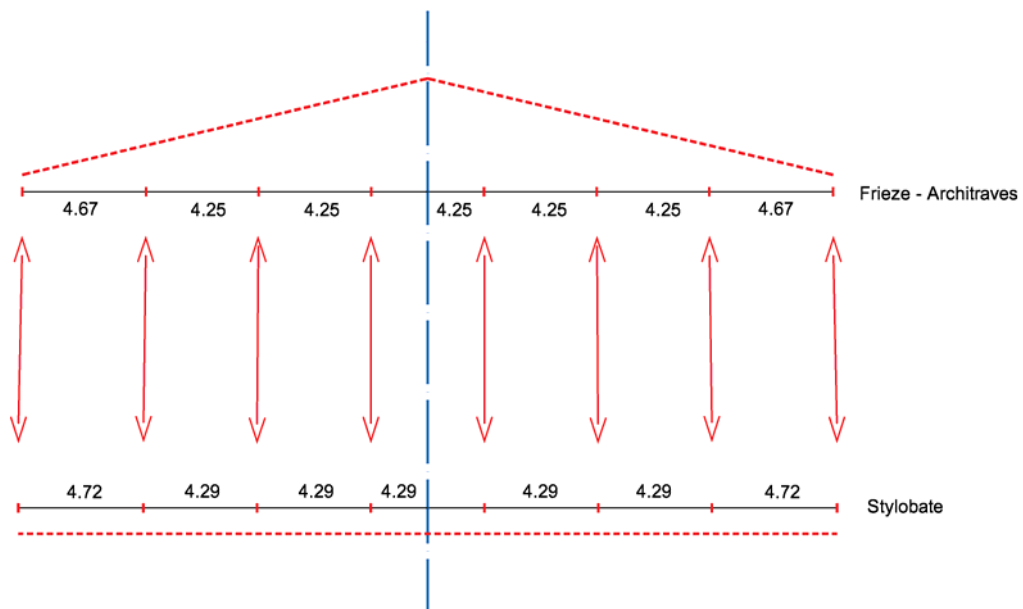


Fig. 13. Parthenon, axial intercolumniations at the base of the columns and lengths of architraves.



the search for equilibrium between the pull of freedom on one side and constraints on the other. The above can be more clearly seen in the diagram where a previously mentioned peculiarity is explained: the columns are set back from the edge of the stylobate and lean inwards (*fig. 12*), with the consequence that the frieze and the architrave also shift inwards.<sup>28</sup> The consequence of these adjustments is that the segments of the lower and upper parts of the temple are not equal, and each of the two parts refers to a separate numerical system.<sup>29</sup> This circumstance can be demonstrated by dividing the lengths of the two parts by the number of axial intercolumniations.

If we draw straight lines vertically from the upper part of the architrave down to the stylobate, it is clear that the lines do not meet the column axes, because there are 4 cm of difference between the upper and lower parts, 5 cm at the edges (*fig. 13*). These differences are not perceived by the viewer, to whom it appears that the lines are perfectly vertical and that every point coincides. Therefore, if we study the temple in terms of visual effects and visual perception no anomalies are found, whereas a study performed only

with measuring equipment reveals differences between the various parts.<sup>30</sup> These discrepancies have often been the source of contrasting opinions, many scholars putting them down to 'mistakes by the builders' and the optical adjustments as adaptations to these 'mistakes by the builders'. But in the Parthenon, as well as the other Doric temples, the principles of modularity and proportioning deriving from the morphological constraints of various codified parts are applied; these principles leave little room for improvisation. Furthermore, if, when studying these differences, one sets one's compass and ruler along sloping axes or compensation lines in the parts that draw together the elements without identifying the key points, then it is inevitable that one's results will be askew, unequal and even incomprehensible, with the result that the overall plan is neglected in favour of the individual parts. This brings us back to the designer's decision to shift the upper part and tilt the columns inwards: this operation means that different spacing was required to accommodate the different rhythm of the various components of the trabeation (architraves - metopes - triglyphs - *geison*).

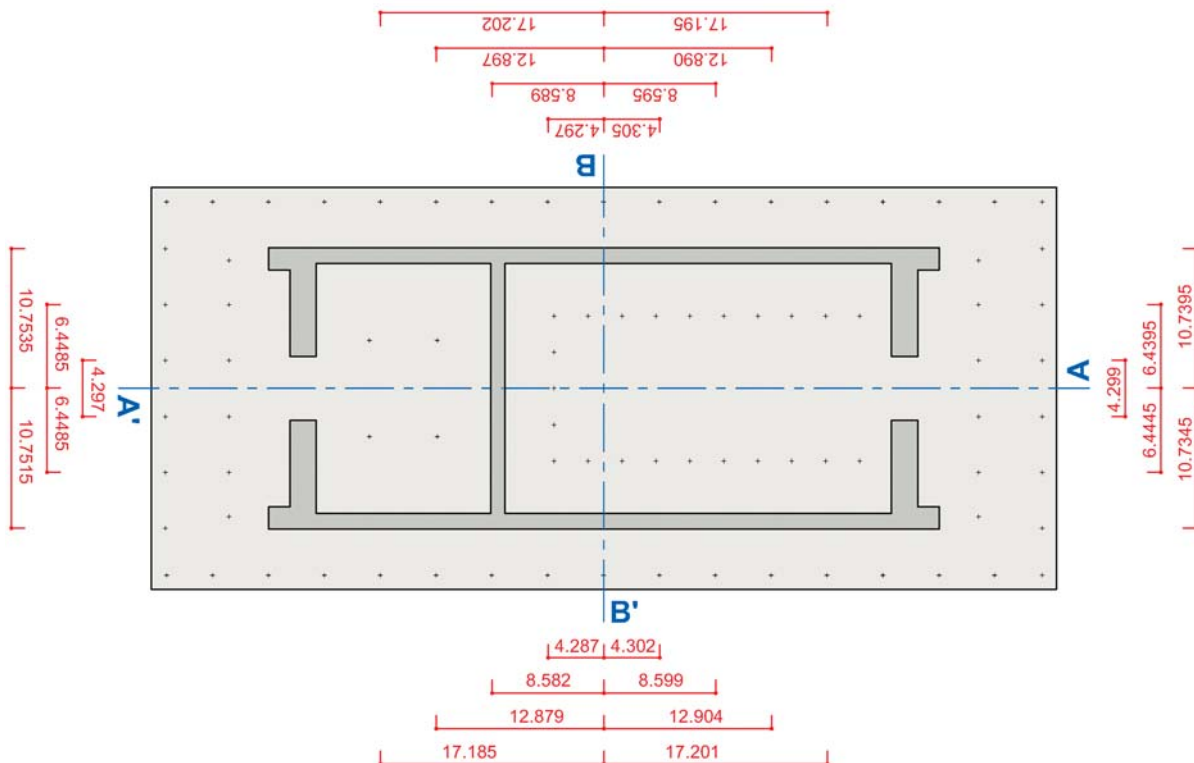


Fig. 14. Parthenon, axial symmetry.

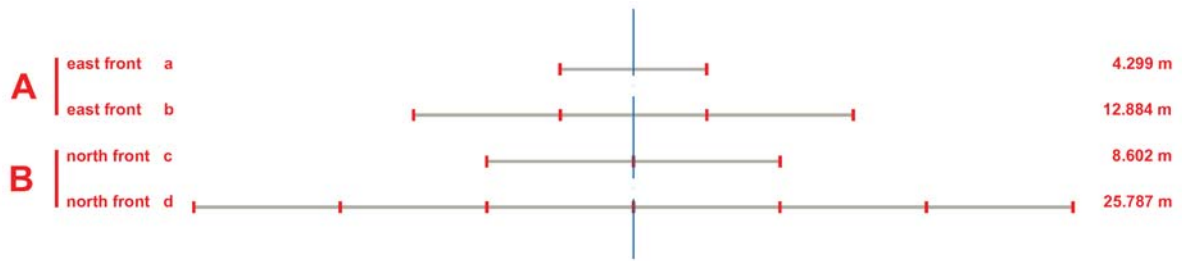


Fig. 15. Parthenon, relationships between segments on the east and north fronts.

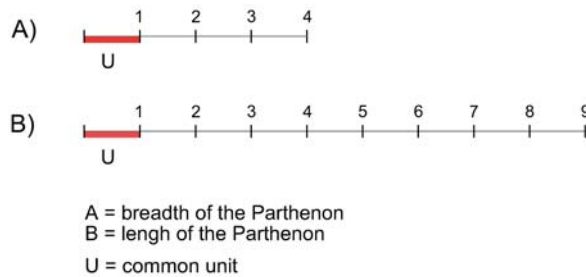


Fig. 16. Parthenon, the segments A and B are symmetrical.

The architectural composition proceeds, involving various architectural components in the rebalancing and compensation in order to make the parts compatible with each other and to draw together divergent elements, in particular bringing the upper and lower parts of the temple into harmony.<sup>31</sup>

The stylobate is also involved in the re-adjustment operations, not in terms of its proportions but in the variations in its height. Here again the changing level of this architectural feature has been the subject of various interpretations other than the desire for visual perfection. The most often quoted interpretation is that the floor was made higher in the centre for a practical purpose: to let rainwater run off towards the outside.<sup>32</sup> The adjustments and the various architectural devices employed to compensate them made it necessary to establish new positions for the columns. The difference in measurements is more noticeable near the corners, where composition is more problematical. Towards the central areas of the sides, however, the segments between the centre of each column display another of the mathematical concepts behind the building's design: symmetry along an axis (fig. 14). A study of the diagrams highlights precise points of reference: the parts are symmetrical to each other and are at the same distance from the central axis.<sup>33</sup> These are references that the

designer wanted to draw attention to and they constitute further confirmation that the accuracy in establishing the proportions - in creating the slight curve in the shape of the columns, in the stepped stylobate and the mathematical coordination of the general points of reference - is a requisite that was set in the earliest design stages.

The segments of the axes A and B can be compared with one another, giving us the following proportion:

$$a : b = c : d.^{34}$$

The sizes are proportional even if we swap them around, obtaining:

$$a : c = b : d.$$

These relationships can be found in segments located on different sides of the Parthenon (fig. 15).

One of the references may be to a practical body of knowledge, the high degree of accuracy of which can lead us back to a precise concept. As well as the axial symmetry described above, there is another type of symmetry: the classic symmetry that is the correspondence between two sizes that are not equal but are multiples of a common unit.<sup>35</sup>

Let us take the breadth and the length of the temple, which, as we have already established, have a ratio of 4 : 9. There is correspondence between these two segments because their measurements are based on a common unit of measurement (fig. 16). In figure 10 we can examine the shared unit of measurement U, which is equal to 9 parts, and the diagram derived from arithmetical and geometrical calculations and observations (fig. 17). The vertical axis is set in relief against the elements of the horizontal plane: the height of the columns, the architrave, the frieze, the *geison*, the tympanum - in short, the height from the stylobate to the upper level. Figures 17-18 also highlight the axial intercolumniations that lead to the division of the front into 36 parts and the side into 81 parts, once again confirming the ratio of 4 : 9.

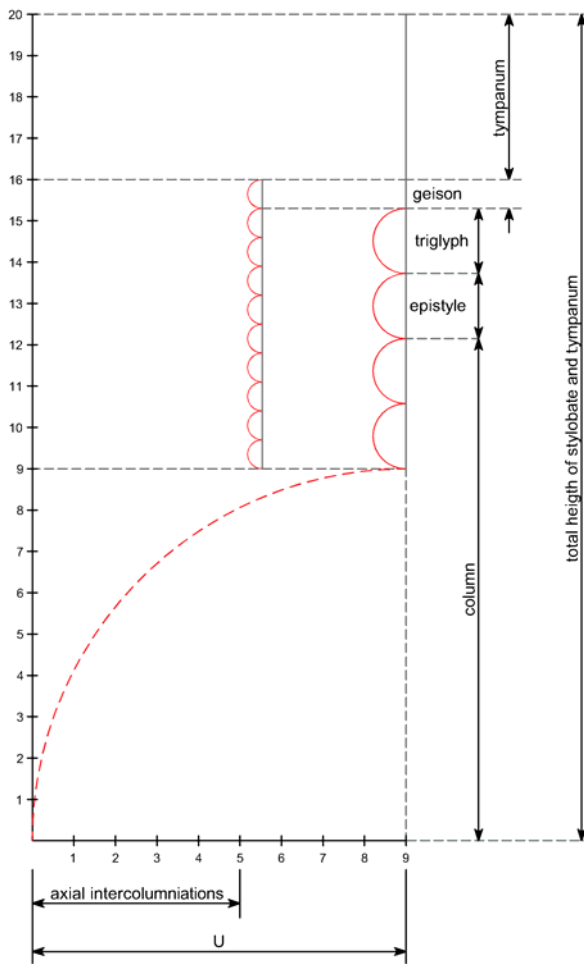


Fig. 17. Parthenon, diagram of partitions.

The diagrams are obtained through working on the partitions; they concern the practical division of the measurements relating to the front and side by the respective number of axial intercolumniations, confirming the mathematical positioning of the columns.

The partitions are the 'blocks' used to construct the form of the temple. In creating it, some elements follow the rules of proportions and equivalent ratios, some follow the rules of perfect lines of sight and perspective; yet others follow the rules of symmetry and the most meticulous forms of modelling. The various concepts involved in the practice are closely linked to a theoretical work written after the Parthenon was built, Euclid's *Elements*, the most ancient and important Greek text on mathematics to survive until the present day. In it he also discusses concepts from the 5<sup>th</sup> century BC, the primitive mathematical concepts that were being developed and that the Parthenon bears witness to.

#### FINAL REMARKS

In this essay we have underlined some of the peculiarities displayed by the Parthenon, practical transpositions of the knowledge and scientific thought of the 5<sup>th</sup> century BC. In the temple we find choices arising from mathematical calculations, such as the ratios repeated time and time again, the analogies and the proportions. Other peculiarities could be considered the result of practical considerations, such as the size of the spaces, the alignment of elements and adjustments made for the sake of optical illusion. These are characteris-

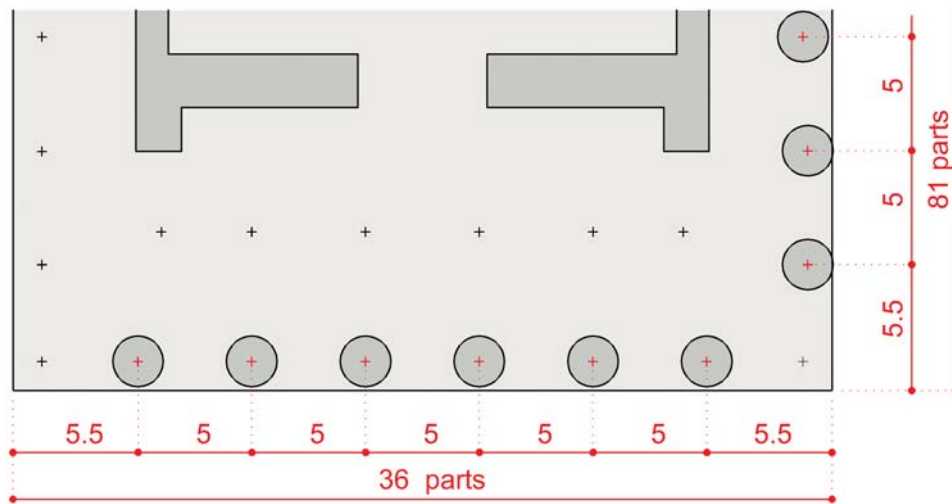


Fig. 18. Parthenon, diagram showing position of columns.



tics of the Parthenon that could be presented to the public through the use of interpretive boards summarizing the information, designed for use in a museum. These boards would explain what knowledge has been acquired through various studies, following the directions suggested by the vast body of research on this topic. It is a journey that takes us from the initial choice of ratios to the proportions and finally to the partitions that define the architectural lines, accompanied all the while by symbols, concepts and images, which belong to the Parthenon every bit as much as its architectural elements and sculptures.

## NOTES

- \* For Clara, thanks for help with the advice and with the confrontation of ideas. I would like to express appreciation to Giorgio Valentini and Beatrice Bissoli for the processing of the original drawings.
- 1 Work began in 447 BC (two years after the truce with Persia) and was completed in 432; thanks to the speed with which work progressed, it was already possible in 438 to place inside the new temple the enormous sculpture of Athena Parthenos created by Phidias: twelve metres high, coated in gold, with her uncovered parts in ivory and her eyes studded with precious gems. Phidias was also the head supervisor of the construction work, while the architects Iktinos and Kallikrates were in charge of designing and creating the temple. This comes from Plutarch, *Pericles* 13.
  - 2 Brigo 2008, 103-104.
  - 3 Vitruvius, *De Arch.* 7, Preface
  - 4 1.44 is a 'stock' number found in various relationships.
  - 5 Szabò 1978, 22.
  - 6 These are thirteen volumes that discuss subjects relating to geometry, proportions and number theory, with definitions that develop progressively and interconnect. It is believed the work was written in the 4<sup>th</sup> century BC. It is a summary and reworking of various mathematical treatises from the previous three centuries, known as the pre-Euclidian period. At the beginning of this period we find Thales of Miletus teaching Greece about Oriental geometry, then Pythagoras and the 'Pythagorean school', who made important contributions to the early development of scientific geometry. This information comes from Proclus.
  - 7 Ratios which are the same with the same ratio are also the same with one another (Heath 1956, II, 158-159). This is applied in Euclid 5.16 –  $A:B = C:D$ , therefore  $A:C = B:D$ ; in 5.18 –  $A:B = C:D$  therefore  $(A+B):B = (C+D):D$ . Proposition 5.11 is applied in books 6, 10, 11 and 12.
  - 8 6.2: If a straight line be drawn parallel to one of the sides of a triangle, it will cut the sides of the triangle proportionally; and, if the sides of the triangle be cut proportionally, the line joining the points of section will be parallel to the remaining side of the triangle (Heath 1956, II, 194-195).
  - 9 The following relationships emerge:  $OC:OE = 1.44$ ;  $CD:EF = 1.44$ ;  $CD:OC = 4:9$ ;  $EF:OE = 4:9$ .
  - 10 Measures between the centers of the external columns of the front  $a = 28.86m$  - distance between the outer

columns of the opisthodomos  $b = 19.91m$  - height from the stylobate to the *geison*  $c = 13.73m$  (Orlandos 1977-1978, 240, XXVI, XXIX, XXXI). Proposition 6.17 is applied in books 10 and 13.

- 11 The groups of three numbers referring to the length of the sides of a right-angled triangle are called Pythagorean triples. The best-known of these triangles is the one with sides measuring 3,4,5 (Heath 1885, 115-156). There are formulas for finding the Pythagorean triples that are quoted by Euclid in book 1; in the 3<sup>rd</sup> century AD they were used by Diophantos of Alexandria in *Arithmeticon libri sex*.
- 12 The measurements concern the area in front of the opisthodomos: axial intercolumniations =  $4.188m - 4.190m - 4.197m$ , height of columns =  $10.056m$  (Orlandos 1977-1978, XXIX). In practice, Pythagorean triples can also be found in other temples - the ones that have the same axial intercolumniations. At the corners, if we have 3 axial intercolumniations on one side and 4 on the other, the triangle will be closed with the hypotenuse measuring 5 and a perfect right angle will be created. In temples with 6 columns on one side and 13 on the other (meaning 5 equal axial intercolumniations on one side and 12 equal axial intercolumniations on the other), we get a 5,12,13 triangle.
- 13 Number theory is discussed by Euclid in books 7, 8 and 9, and has its foundations in the theory of proportions.
- 14 Total height  $a = 17.16m$  - axial intercolumniations  $b = 4.29m$  - height from the stylobate to the *geison*  $c = 13.73m$  - height of tympanum roof  $d = 3.43m$  (Orlandos 1977-1978, 240,681,XXVIII, XXXI).
- 15 Length of *sekos* (cella + opisthodomos)  $a = 48.27m$  - breadth of stylobate  $b = 30.884m$  - length of cella  $c = 29.786m$  - breadth of cella  $d = 19.065$  - external breadth of *sekos*  $e = 21.44m$  - height from the stylobate to the *geison*  $f = 13.73m$  (Orlandos 1977-1978, XXVI).
- 16 Euclid 7.13: if four numbers be proportional, they will also be proportional alternately (Heath 1956, II, 313).
- 17 Numbers from Pythagorean maths and arithmetical geometry (Burkert 1972, 427-447).
- 18 Szabò 1978, 166.
- 19 Vitruvius, *De Arch.* 3.2.
- 20 Dinsmoor 1950, 90.
- 21 Dinsmoor 1950, 53.
- 22 Krauss 1941, 59.
- 23 Orlandos 1977-1978, 125.
- 24 The setting back and the inward tilt of the columns lead to a reduction in the perimeter of the upper part of over 4 feet - 1 foot per side compared with the stylobate below.
- 25 Vitruvius, *De Arch.* 3.2.
- 26 Vitruvius, *De Arch.* 4.3.
- 27 Dinsmoor 1950, 162.
- 28 Orlandos 1977-1978, 173, 240.
- 29 The mathematical measure between the centers of the columns is  $4.2912m$ , are: for the front  $30.896m$  ( $4.2912 \times 7.2$ ) and for the side  $69.517m$  ( $4.2912 \times 16.2$ ). The ratio of the sides of the perimeter at the height of the frieze, which was 4:9 before the shift inwards, is here 3.961: 8.961.
- 30 Korres 1994, 78-83.
- 31 The inwards shift of the columns also leads to a reduction in the length of the frieze. The triglyphs have consistent reductions thanks to their symmetrical and consistent design. The issue of adjusting the metopes, however, is a different matter: they are akin to paintings, albeit with sculpted pictures, and to the eye pic-

tures of the same size but with different-sized figures in them can appear different. Moreover, originally there was not only the shape but also colour giving rise to differing visual perceptions.

<sup>32</sup> It must be said that this problem does not exist, as rain-water ran off the roof, which was a solid covering with a gable overhanging the triglyphs and metopes.

<sup>33</sup> Orlandos 1977-1978, XXVI.

<sup>34</sup> Euclid 5.16.

<sup>35</sup> Vitruvius, *De Arch.* 1.2.

## BIBLIOGRAPHY

- Berger, E. 1984, *Parthenon-Kongress Basel, 1982*, Mainz.  
 Berriman, A.E. 1953, *Historical Metrology*, London/New York.  
 Boyer, C.B. 1991, *A History of Mathematics*, New York.  
 Brigo, R. 1999, *Partenone tre partiture*, Verona.  
 Brigo, R. 2008, La matematica e l'architettura del Partenone, *BABESCH* 83, 99-105.  
 Burkert, W. 1972, *Lore and Science in Ancient Pythagoreanism*, Cambridge (Mass.).  
 Dinsmoor, W. B. 1950, *The Architecture of Ancient Greece*, London.  
 Fraiese, A./L. Maccioni 2008, *Euclide, Gli Elementi*, Turin.  
 Hardy, G.H./E.M. Wright 1980, *An Introduction to the Theory of Numbers*, Oxford.  
 Heath, T.L. 1885, *Diophantos of Alexandria; A Study in the History of Greek Algebra*, Cambridge.  
 Heath, T.L. 1956, *The Thirteen Books of Euclid's Elements*, New York.  
 Korres, M. 1994, The Architecture of the Parthenon, in Tournikiotis (ed.), *The Parthenon And Its Impact in Modern Times*, Athens, 56-97.  
 Krauss, F. 1941, *Paestum*, Berlin.  
 Morolli, G. 1988, *L'architettura di Vitruvio*, I-II, Florence.  
 Morrow, G.R. 1992, *Proclus*, Princeton.  
 Mugler, Ch. 1958, *Dictionnaire historique de la terminologie géométrique des Grecs*, Paris.  
 Naredi-Rainer, P. von 1982, *Architektur und Harmonie*, Cologne.  
 Orlandos, A.K. 1977-78, *He Architektonike tou Parthenonos*, 1-2, Athens.  
 Pavan, M. 1983, *L'avventura del Partenone. Un monumento nella storia*, Florence.  
 Perrin, B. 1967, *Plutarch's Lives*, Cambridge.  
 Scranton, R.L. 1964, *Aesthetic Aspects of Ancien Art*, Chicago/London.  
 Shubnikov, A.V./V.A. Koptsik 1974, *Symmetry in Science and Art*, New York.  
 Stucchi, S. 1955, Nota introduttiva sulle correzioni ottiche nell'arte greca fino a Mirone, *ASATene* 30-32, 23-73.  
 Szabó, A. 1978, *The Beginnings of Greek Mathematics*, Dordrecht/Boston.  
 Tannery, P. 1887, *La géométrie greque*, Paris.  
 Zwarte, R. de 2006, Greek temple design reconsidered: the temple of Athena at Paestum and its monumental stepped altar, with a digression on methodology in Greek metrology, *Talanta* 36-37, 11-47.

VIA ROMA N. 1  
 I-37069 VILLAFRANCA  
 roberto.brigo@libero.it

# Apollo mediating identities in ancient Greek Sicily

Lieve Donnellan

## Abstract

*The importance of the cult of Apollo Archegetes of Naxos for Sicily is amply recognised, and is generally connected by scholars with Sicilian theoria and communal identity. It is claimed in this paper, however, that the religious and political functions of Apollo Archegetes were more diverse and that Apollo Archegetes fulfilled an important local role, rather than being a symbol of a universal and well defined Sikeliot identity. Numismatic evidence indicates that Apollo Archegetes symbolised the opposition of Naxos, Leontinoi and Katane against Syracuse in the 5<sup>th</sup> century BC. Only in the 4<sup>th</sup> century BC, with the Timoleonitic symmachia, was the image of Apollo Archegetes truly pan-Sikeliot. Sikeliot identity was in the Archaic period rather loose and of a religious nature. It is proposed to call this identity 'proto-Sikeliot', to distinguish it from a well defined Sikeliot identity, which crystallised only after the Athenian invasion, to become well established in the 4<sup>th</sup> century BC.\**

When ancient Greek colonists first landed in Sicily, they founded the colony Naxos (fig. 1) and they erected an altar for Apollo Archegetes; such is told by Thucydides, in his *Sicilian Archaeology*:<sup>1</sup>

Ἑλλήνων δὲ πρῶτοι Χαλκιδῆς ἐξ Εὐβοίας πλεύσαντες μετὰ Θουκλέους οἰκιστοῦ Νάξον ὥκισαν καὶ Ἀπόλλωνος Ἀρχηγέτου βωμόν, ὅστις νῦν ἔξω τῆς πόλεως ἐστίν, ἰδρύσαντο, ἐφ' ᾧ, ὅταν ἐκ Σικελίας θεωροὶ πλέωσι, πρῶτον θύουσιν.

'Of the Hellenes, on the other hand, the first to sail over were some Chalkidians from Euboea who settled Naxos with Thukles as founder, and built an altar in honour of Apollo Archegetes. This is now outside the city, and on it sacred deputies, when they sail from Sicily, first offer sacrifice.'

A cult for *Apollo Archegetes*, still existing centuries later in Naxos, is mentioned by Appian, when he recounts the arrival of the fleet of Octavian in Tauromenion:<sup>2</sup>

ἐλθὼν δ' ἐπὶ τὸ Ταυρομένιον προσέπεμψε μὲν ὡς ὑπαξόμενος αὐτό, οὐ δεξαμένον δὲ τῶν φρουρῶν παρέπλει τὸν ποταμὸν τὸν Ὀνοβάλαν καὶ τὸ ἱερὸν τὸ Ἀφροδίσιον καὶ ὠμίσατο ἐς τὸν Ἀρχηγέτην, Ναξίων τὸν θεόν, ὡς χάρακα θησόμενος ἐνταῦθα καὶ ἀποπειράσων τοῦ Ταυρομενίου. ὃ δὲ Ἀρχηγέτης Ἀπόλλωνος ἀγαλματίον ἐστίν, ὃ πρῶτον ἐστήσαντο Ναξίων οἱ εἰς Σικελίαν ἀπωρισμένοι.

'Arriving at Tauromenium, he sent messengers

to demand its surrender. As his guards were not admitted, he set sail to the river Onobalas and the temple of Aphrodite, and moored his fleet at the shrine of the Archegetes, the god of the Naxians, intending to pitch his camp there and attack Tauromenium. The Archegetes is a small statue of Apollo, erected by the Naxians when they first migrated to Sicily.'

Although a sanctuary for *Apollo Archegetes* has never been found, the existence of the cult mentioned in the texts is confirmed by the frequent appearance of the head of Apollo, in some cases with the epithet '*Archegetes*', on the coinage of some of the cities in Sicily.<sup>3</sup>

## INTRODUCTION

A lot of attention has been paid to the cult for *Apollo Archegetes*, because of its significance for a pan-Sikeliot identity, that is, a shared identity of all the Greek colonists of Sicily.<sup>4</sup> As a consequence, it will be argued here, the local dimension of the cult of *Apollo Archegetes* has been overlooked. The pan-Sikeliot significance of *Apollo Archegetes* has been generally linked to the arrival of Greek colonists in Sicily. As Thucydides says, the foundation of the cult of *Apollo Archegetes* was connected with Theokles, the *oikistes* of the first colonists in Sicily. Pan-Sikeliot identity, as is generally supposed, focused on this cult of *Apollo Archegetes*, the first sanctuary of the first Greek colony in Sicily, thus representing Greekness and foreignness in a new country, and connecting with the homeland, hence the sacrifice of the *theoroi* (religious ambassadors) before embarking on their



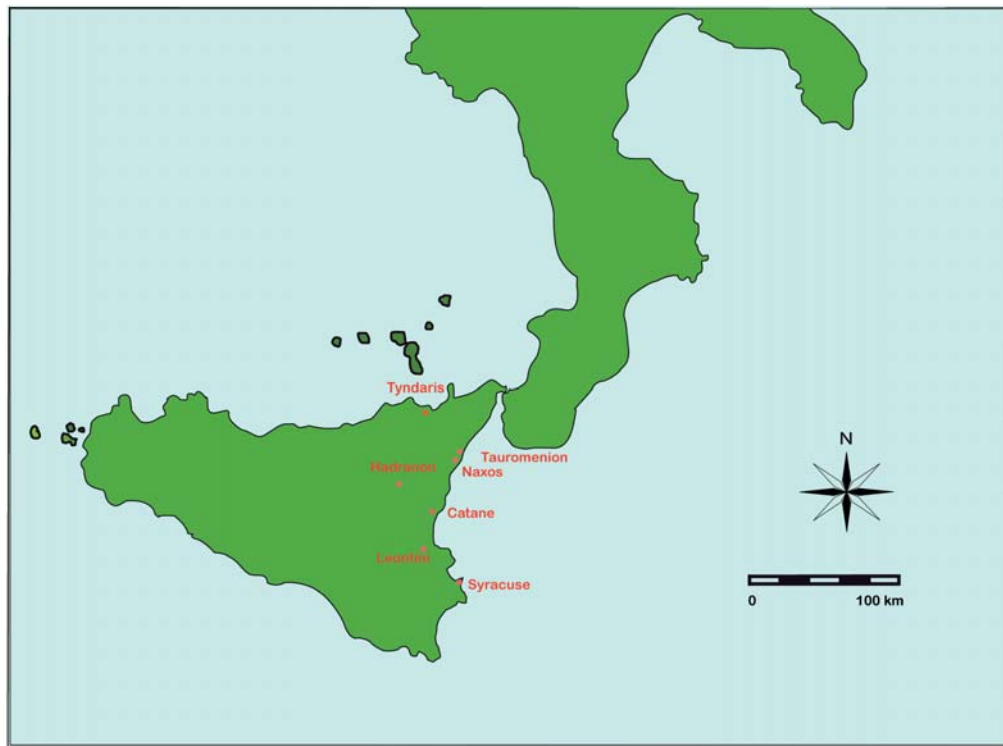


Fig. 1. Map of Sicily showing the most important sites mentioned in the text.

sacred mission, mentioned by Thucydides.<sup>5</sup> However, it is argued in this paper that the evidence indicates that the connection *Apollo Archegetes* - pan-Sikeliot identity, traditionally made by scholars, has been too fierce, and that the cult of *Apollo Archegetes* should be assigned in the first place a religious importance, rather than a political one, for the Greek colonists of Sicily, and that the cult had an important local significance for Naxos and her daughter cities Leontinoi and Katane. As a consequence, the pan-Sikeliot 'ethnic' dimension of the cult of *Apollo Archegetes* needs to be reassessed.

Most attention to the pan-Sikeliot role of *Apollo Archegetes* has been given by Irad Malkin.<sup>6</sup> He stresses the joint Dorian - Ionian veneration of the god, and points to the fact that the *theoria* (religious embassy) proves its regional importance. Malkin is, at the same time, convinced that the *oikistes* Theokles, mentioned by Thucydides and other ancient writers, did not initially erect the altar for Apollo as god of colonisation. He claims that the reason for the erection of the altar should be sought in Apollo's maritime functions: first he was Apollo of happy landing (*ekbasios*), the preserver of ships (*neossoos*), and the god of the shore (*aktios*, *aktaios*).<sup>7</sup> Since Apollo was also the *Archegetes*, the leader of foundations, a title whose sig-

nificance was supreme for the colonists, it was this attribute, according to Malkin, which came to overshadow all others, and as such the altar became a permanent place of worship. The installation of other colonies in Sicily, already in the late 8<sup>th</sup> century BC, made that the altar of Apollo at Naxos quickly became *Archegetes* of all Greek foundations on the island. Malkin sees a similar development in Massalia with the pan-Ionian cult of *Apollo Delphinios* there.

Because of its supposed pan-Sikeliot role, Malkin, and others, have connected the sanctuary of *Apollo Archegetes* in Naxos with the oracle of Apollo at Delphi, although no oracle for the foundation of Naxos has been given, or survived.<sup>8</sup> The oracle of Apollo at Delphi is known to have fulfilled a central role in the Greek colonisation movement. Delphi initiated, sanctioned and guided colonial enterprises. It was the god Apollo who legitimated colonisation through his oracle. It was from Apollo that the founder, the *oikistes*, received his power, resulting in his honouring and remembrance through cult, even after his death. Colonies, which were not founded by the guidance of Delphi invented oracles to add prestige to their colony.<sup>9</sup> *Apollo Archegetes* of Naxos, thus, connects to Delphi.

This connection has been heavily disputed, for

others have tried to connect *Apollo Archegetes* of Naxos with Delos.<sup>10</sup> It is thought that, apart from the Chalkidians mentioned in the sources, a contingent of colonists originating from the Cycladic island Naxos participated in the foundation.<sup>11</sup> Cycladic Naxos is known to have dominated the island of Delos, the birth place of Apollo, and to have erected costly dedications there, therefore a connection of the homonymous Sicilian foundation with Delos has been proposed by some scholars.<sup>12</sup> That the Naxian domination of Delos, however, can be dated only a century after the foundation of the colony Naxos, itself dated by Thucydidian chronology in 734 BC, a date confirmed by pottery, as well as the lack of a clear Delian connection with colonisation, makes this proposed link between Delos and Sicilian Naxos very unlikely.<sup>13</sup>

*Apollo Archegetes* fulfilled a key role for the Sicilian colonies, not only as a reference point for identity, but also as anchor point for the chronology of the foundation of the colonies. Oswyn Murray states that the Thucydidian chronology is the only set of coherent foundation dates we have, calculated in years, and not in generations, and that this is probably due to the correlation of the foundation dates of the other colonies with Naxos, and with the installation of the sanctuary of *Apollo Archegetes*.<sup>14</sup> This implies that the primacy of Naxos was recognised by the other colonies, although Naxos was a relatively small and unimportant polis. Naxos can only have gained this importance because of the possession a sanctuary, valued by the other cities; there is, indeed, not a single successful claim of another Greek Sicilian city trying to surpass Naxos' position as earliest foundation. The importance of the oracle in Delphi for the conceptualisation of colonisation can only have added importance to *Apollo Archegetes* of Naxos.

The importance of *Apollo Archegetes* in Sicily has thus been amply recognised, and is generally connected by scholars with Sicilian *theoria* and communal identity. Detailed analysis of the available evidence is used in this paper, however, to claim that the religious and political functions of *Apollo Archegetes* were more diverse than hitherto thought, and that these functions are to be related to an important local significance, centred around the foundation of Naxos, rather than a universal and well defined Sikeliot identity. The cult of *Apollo Archegetes* started to acquire limited political and probably military dimensions for Naxos and her daughter cities during the 5<sup>th</sup> century BC, to represent bonds opposing a communal enemy, Syracuse. Despite a joint Sicilian cult focussing on

*Apollo Archegetes* pan-Sikeliot identity was rather loose and related to religion (the *theoria* to the sanctuary of *Apollo Archegetes*) rather than political unity or ethnic identity. It is argued that other dynamics caused a crystallisation of a clear communal pan-Sikeliot identity.

Several attempts to locate the sanctuary of *Apollo Archegetes* have been undertaken in the past, however, without success: it has been proposed that the altar of *Apollo Archegetes* should be sought on the place where a statue was erected, in AD 1691, in the memory of the seventh centenary of Saint Pancratius, the saint who had defeated local paganism. Later, it was suggested that the sanctuary was located in the so-called area of Scalia, where, during excavations, an altar was found, which would coincide with Thucydides' description. However, in the same sanctuary, a dedication for the goddess of bloody close combat, Enyð, was found.<sup>15</sup> A satisfying alternative for the location of the altar of Apollo has not yet been proposed, but will be attempted here as well.

#### THE LOCAL DIMENSION OF *APOLLO ARCHEGETES* OF NAXOS

##### *Apollo Archegetes and the Representation of the Foundation of Naxos*

Sanctuaries transcending the purely local level served, in the Greek world, as a focus for regional bonds and identities, for example Mykale or Delos for the Ionians, or the Achaian League, gathering at the sanctuaries of Aigion, Poseidon Helikonios and Zeus Amarios.<sup>16</sup> The pan-Hellenic dimensions of some sanctuaries, like Olympia and Delphi, are well known. Here, Hellenic identities were forged and reinforced through cult practice, games, dedications and competition.<sup>17</sup>

As early as the 16<sup>th</sup> century, a similar dimension of the cult of *Apollo Archegetes* of Naxos has been proposed: through cult practice in Naxos of all the Greek *theoroi* leaving Sicily, a communal, pan-Sikeliot identity rose.<sup>18</sup> The cult practice would have both expressed and reinforced this Sikeliot identity, which was defined as an awareness of being different from the other Greeks, of belonging to a separate region, together as inhabitants of a new land. The particularity of island-identities has been stressed recently in other contexts.<sup>19</sup> However, the pan-Hellenic sanctuaries fulfilled as well a role for the communities which surrounded them. The sanctuary of *Apollo Archegetes* has likewise served as focus for the Naxian community. Catherine Morgan pointed out that the pan-Hellenic

sanctuaries of Olympia and Delphi served in the first place the local communities and that they gained a wider, regional, importance only through time. For example, the beginning of the cult at the sanctuary at Delphi can be dated to the 9<sup>th</sup> century BC, and more varied origins of the worshippers, reflecting a regional interest, are visible from the end of the 8<sup>th</sup> century BC on - the date when, probably, the oracle was established. Morgan states that it is unlikely that Delphi fulfilled a pan-Hellenic role from the earliest phases.<sup>20</sup> Even throughout its existence, the local community was involved in the management of the sanctuary, for example, through the proxenos needed for the consultation of the oracle, or decisions concerning the spatial organisation.<sup>21</sup> The Sacred Wars fought with the Amphyktynony and others show that the local level and the Hellenic level were not always at pace.

The local level of *Apollo Archegetes* has gained little attention before. The cult for *Apollo Archegetes* had been founded initially for the polis of Naxos, upon the arrival of the very first Greek colonists in Sicily. The altar gained a pan-Sikeliot significance gradually afterwards, because of the important connection with colonisation in general and the link with Sicilian *theoria*, as has been stressed by various scholars. It is crucial to consider the context of the foundation of the cult and its significance to understand the ways in which the cult developed its broader regional role. Insight in the local role of *Apollo Archegetes* is the key to understand the development of Sikeliot identity, and, as will be demonstrated, enables us to locate the cult site more precisely.

The local role of *Apollo Archegetes*, related to the polis of Naxos, is visible in some coinages of the 5<sup>th</sup> century BC, which is the period to which the first testimonies to its existence date. The image of Apollo appears first on a series of tetradrachmes of Leontinoi, dated to 466 BC by C. Boehrer (fig. 2). Leontinoi was a daughter city of Naxos founded together with Katane by the Naxian *oikistes* Theokles, in 728 BC, six years after the foundation of Naxos itself.<sup>22</sup> This series of tetradrachmes has on the reverse the head of a lion. Another series of tetradrachmes is very similar to the first one in showing the head of Apollo, but it has a quadriga on the reverse. Smaller denominations equally carried the head of Apollo. The Leontinian emissions, including those with the head of Apollo, end probably in 415 BC.<sup>23</sup> The first emissions of Naxos' second daughter city, Katane, are dated slightly later and begin probably ca 461 BC. After 450 BC a series of hemilitrai and hexantes show the head of Apollo, as do the



Fig. 2. Silver tetradrachme of Leontinoi, showing the head of Apollo, ca 466 BC.



Fig. 3. Silver tetradrachme of Katane, with the laureate head of Apollo, ca 450 BC.

tetradrachmes, and drachmes (fig. 3). Several of the smaller denominations show the head of a Silen, interestingly referring to the images of the Naxian coins, on which Dionysiac motifs prevail.<sup>24</sup> In Naxos the image of Apollo supplements the Dionysiac motifs on drachmes and its lower denominations, after 420 BC (fig. 4).<sup>25</sup>





Fig. 4. Silver didrachme of Naxos with the head of Apollo, laurel leaf and berry, ca 420 BC.



Fig. 5. Dilitron of Tauromenion, ca 350-300 BC, showing the laureate head of Apollo and epithet ARCHEGETES.

Apollo was not present on the coinages of the other Sicilian cities, when Katane, Leontinoi, and Naxos used his image.<sup>26</sup> The historical context of the choice of Apollo on the coins is indicative: in 476 BC Hieron, the tyrant of Syracuse, destroyed

Katane and Naxos, and deported the inhabitants to Leontinoi.<sup>27</sup> Only with the fall of the tyranny, in 461 BC, were the inhabitants of Naxos and Katane able to return to their homes. It is in connection with these events that both Leontinoi and Katane started issuing coins with the head of Apollo: the choice for the Apollonian theme starts in Leontinoi in the period that the Naxians were living there in exile! The more prominent role of Apollo in this context stresses therefore the relation of Leontinoi with Naxos. The occurrence of the head of a Silen on the emissions of Katane in the same period as the use of the head of Apollo, favours this interpretation of a privileged Naxian link. Naxos confirms and supports the Leontinian and Katanian claims by choosing the same image for some of its emissions.

The importance of Apollo in Naxos, Leontinoi and Katane thus served to stress the idea of a bond, existing through communal foundation, centred around Naxos. By stressing their communal origins, they were able to distinguish themselves from threatening Syracuse. The awareness of the prominence of *Apollo Archegetes* among the Sicilian poleis was probably implied in the usage of the Apollonian imagery in Naxos and her daughter cities, and indicates a multi-dimensional functioning of the cult, and negotiated meanings between the local and the regional levels.

*Apollo Archegetes* continues to appear on coinages of the 4<sup>th</sup> century BC, but, as in the 5<sup>th</sup> century BC, his appearance is especially related to local kinship, rather than pan-Sikeliot identity. A series of dilitroi with the legend NEOPOLITOI is ascribed to a settlement, though never located, of the refugees of the destroyed city of Naxos (destroyed in 403 BC for a second time by Syracuse); this short-lived emission was soon followed by the coinage of Tauromenion, the official successor city of Naxos, newly founded, at a short distance of the old city, by Andromachos, in 358 BC (fig. 5).<sup>28</sup> The choice for *Apollo Archegetes* on the coins of the Neopolitoi and Tauromenion reflects a restoration, even appropriation, of the earlier symbols of Naxos. Also here, a pan-Sikeliot role is not directly implied, although likely to have played on a higher level, in the use of the image of *Apollo Archegetes*.

The following decade, *Apollo Archegetes* developed clearly a broader role in coinage imagery: apart from Tauromenion, the cities Hadranon and Tyndaris also used the image of the god, as well as some other emissions, issued by a '*symmachia*' (fig. 6).<sup>29</sup> This *symmachia* can be related to the activities of Timoleon, who was appointed in 345



Fig. 6. Hemilitron of Hadranon with the head of Apollo, 339-336 BC.

BC on request of the Syracusians to fight against their tyrant Dionysos II and the Carthaginians.<sup>30</sup> As soon as he arrived in Sicily, Timoleon allied with Tauromenion, and subsequently incorporated the other cities, Greek, as well as indigenous, into a *symmachia*.<sup>31</sup> Timoleon carried out a well defined program of propaganda against his adversaries, using clear symbols, i.e. coinage.<sup>32</sup> Apart from *Apollo Archegetes*, *Zeus Eleutherios* and the nymph *Sikelia* are the most widespread images in this context. *Apollo Archegetes*, however, can be specifically connected to the first phase of the *symmachia*, between the arrival of Timoleon in 344 BC, and his conquest of Syracuse, in 334 BC, a phase in which his first ally was Andromachos of Tauromenion. *Apollo Archegetes*, thus, refers in the first place to Tauromenion and is not used by the whole of Sicily. From the later 4<sup>th</sup> century on, likely facilitated by the *symmachia* of Timoleon, the use of Apollo's head on the coinage becomes frequent in the whole of Sicily. The regional role of *Apollo Archegetes*, and his link with Sicily as a whole, becomes now the core message in the new political climate downplaying the role of individual poleis.

*The oikistes Theokles, Apollo Archegetes, and the Foundation of Naxos, Leontinoi and Katane*

*Apollo Archegetes* on coinage in Naxos, Leontinoi and Katane, three poleis claiming to have been founded by the *oikistes* Theokles, expressed ideas of origin and communal foundation. Thucydides

says that after Theokles founded Katane, the Katanians chose Euarchos as *oikistes*. This idea of a shared *oikistes* is quite peculiar: no other Sicilian *oikistes* founded more than one city, and Theokles founded three poleis in six years! This makes him a special founder, perhaps even a compromised *oikistes*, for the typical profile of an *oikistes* in the foundation narrative of Greek colonies relates to a unique and single foundation act, preferably a foundation oracle, and one or more named mother cities.<sup>33</sup> Theokles clearly does not fit this profile. It is commonly agreed among scholars that foundation stories were of primary importance for a colony's identity and cult by representing the self-image of a city through the named *oikistes* and mother cities. Public festivals served as the stage for these foundation narratives.<sup>34</sup> In addition, the foundation was commemorated through architecture, like a tomb of the *oikistes*, located on the agora, or temple sculpture.<sup>35</sup> Theokles, as multiple *oikistes*, could not have functioned in this way, for he had to be shared by three cities: he could not have had a grave on the agora of three different cities at the same time! This means that, as a focus for cult and civic identity, his mythic persona was compromised in a certain way. We have no information about what actually happened with Theokles after the foundation of Leontinoi and Katane, if he returned to Naxos, and received a burial on the agora there, if he stayed in Leontinoi, or if he went somewhere else.<sup>36</sup> As the Katanians had chosen Euarchos as *oikistes*, the way for Leontinoi and Naxos was cleared to reinforce their claims on Theokles.<sup>37</sup> It could be hypothesised that in Naxos the focus of civic cult was shifted partly from Theokles to *Apollo Archegetes*. *Archegetes* means leader, and in the Greek world the *Archegetes* was intimately linked with the polis and her identity (see below). Parallels for the substitution of a 'compromised' *oikistes* by Apollo are known elsewhere.<sup>38</sup> The altar of *Apollo Archegetes* could have served as a materialised expression of the foundation when a tomb of the *oikistes* was lacking. Even if Theokles received a tomb on the agora of Naxos, the altar of *Apollo Archegetes* is likely to have played a crucial role in cult related to the foundation of Naxos, as it was the first sanctuary to be installed by the *oikistes* when he and the colonists landed.

#### THE SPATIAL CHARACTERISTICS OF THE SANCTUARY OF APOLLO ARCHEGETES

In Naxos, the agora was located at the northern border of the city, and was closely connected to



the military harbour (fig. 7). A similar positioning of the agora near the harbour can be found in Thasos, a colony of Paros (fig. 8).<sup>39</sup> Recent excavations in the harbour of Naxos have brought to light five dockyards, providing space for ships having the size of a trireme. The dockyards were probably built towards the end of the 6<sup>th</sup> century BC, and were used until the final destruction of the city in 403 BC.<sup>40</sup> The Naxian agora itself has not yet been excavated; the dockyards are the only public construction known in this area of the town. The presence or absence of a tomb for Theokles on the agora awaits, by consequence, confirmation.<sup>41</sup> Arguments to locate the sanctuary of *Apollo Archegetes* in this area can be brought forward: Appian says that when Octavian moored his fleet at Naxos he did so at the shrine of *Apollo Archegetes*.<sup>42</sup> The shrine, thus, seems to have been located closely to the place where ships were able to land. Also Thucydides' reference of the *theoroi*, offering before embarking for the mainland, suggests a connection of the altar of Apollo with the harbour.<sup>43</sup> Based on this information, two possibilities exist: either the sanctuary was relocated for some reason from inside the city to a zone outside (cf. 'the sanctuary is *now* outside the city'), or the city walls were rebuilt, thus placing the sanctuary of Apollo outside the city proper. It is impossible to say if the part on the east side of the ship sheds, thus forming part of the zone of the agora, is to be favoured, or the part on the north side of the ship sheds, were a trace of the city wall has been found (see fig. 7). In the first case, a change in the course of the city wall, for example during the mid-5<sup>th</sup> century rebuilding of the city, would have separated the Archegesion from the agora, and could have facilitated the access to the sanctuary from the sea. In the second possibility, space would have been needed for the construction of the dockyards, space which was occupied by the Archegesion, thus demanding its relocation to the edge of the city in the north, and causing it to be 'now outside the city'. Because of the fact that the local dimension of *Apollo Archegetes* was indeed stronger than is usually assumed by scholars, a location closer to the agora could be favoured. The location would then coincide with other known sanctuaries for *archegetai* as, for example, in Kyrene, for *Apollo Archegetes*, located on the agora, or Athens, where *Athena Archegetis* and the heroes acting as *archegetes* of the ten tribes of Cleisthenes were venerated on the agora.<sup>44</sup> Interesting, in this context, is the discovery, made in 1935 in Delos of a sanctuary for *Anios*, the son and priest of Apollo, and venerated as *Archegetes* by

the Delians. The sanctuary for the *Archegetes* was intimately connected to the polis of the Delians: in two 5<sup>th</sup>/4<sup>th</sup> century BC decrees, found in the sanctuary, it was explicitly prohibited for strangers (*xenoi*) to enter.<sup>45</sup> Although a similar prohibition as in Delos was not at work at Naxos' Archegesion, because of its primary position among the Sicilian cities, the examples show that the *Archegetes* was an important element in the conception of civic identity in the ancient Greek world.

#### SIKELIOTS, PAN-SIKELIOTS AND PROTO-SIKELIOTS

Parallels suggest a location of the Archegesion of Naxos close to the agora and harbour (see above), and indicate that a close link with civic cult and

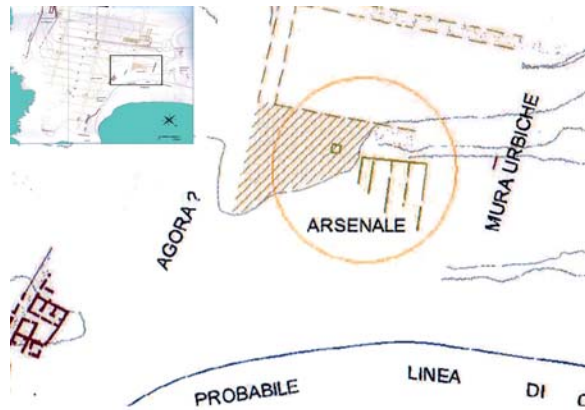


Fig. 7. Plan of the location of the agora of Naxos next to the ship sheds (the arsenal) (map adapted from: Lentini 2009).

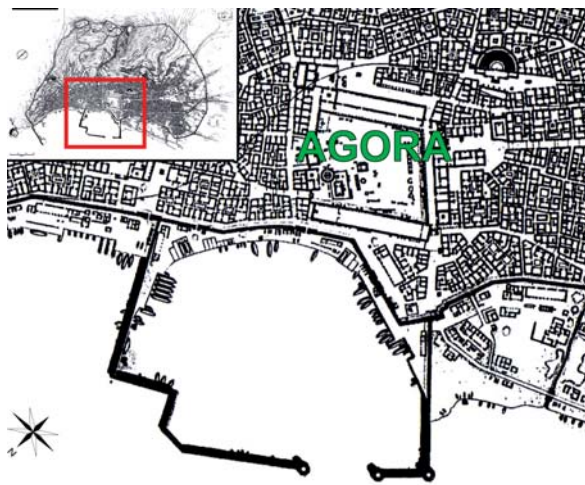


Fig. 8. Plan of Thasos (adapted from Martin 1959, pl. 1).



civic identity existed, as elsewhere in the ancient Greek world. The Naxian Archegesion was particular, however, because of its recognised cultic primacy among the Sicilian cities, expressed through *theoria*, and its alleged connection with pan-Sikeliot ethnic identity, which will be analysed in this section.

The term 'Sikeliotai' appears for the first time in Thucydides, when he recounts the speech of Hermokrates, at the reunion of the Sicilian ambassadors at Gela in 424 BC, to discuss the threat of an Athenian invasion in Sicily.<sup>46</sup> Hermokrates urges his fellow Sikeliotai to consider communal interest rather than opposing identities, in terms of Dorians and Ionians:

Οὐδὲν γὰρ αἰσχρὸν οἰκείους οἰκείων ἡσσᾶσθαι, ἢ Δωριᾶ τινα Δωριῶς ἢ Χαλκιδέα τῶν ξυγγενῶν, τό τε ξυγγενῶν, τό τε ξύμπαν γείτονας ὄντας καὶ ξυνοίκους μιᾶς χώρας καὶ περιφύτου καὶ ὄνομα ἐν κεκλημένους Σικελιώτα·

'For there is no disgrace in kinsmen giving way to kinsmen, a Dorian to a Dorian or a Chalkidian to men of the same race, since we are, in a word, neighbours and together are dwellers in a single land encircled by the sea and are called by a single name, Sikeliotai.'

As mentioned earlier, scholars correlate this reference to the 'Sikeliotai' with a regional ethnic identity of Greek colonists in Sicily.<sup>47</sup> They believe that this identity has existed from the beginning of Greek colonisation in Sicily on in the 8<sup>th</sup> century BC, contemporary with the foundation of the sanctuary of Naxos: the establishment of a shared cult would have generated, immediately, a common identity. Recent work on ethnic identities has demonstrated, however, that identities, are social constructions, and not some kind of passively acquired quality by birth.<sup>48</sup> Identities, thus, cannot be 'founded' in the same way that cults are. A common identity is, logically, a consequence of a shared cult of newcomers. A shared cult, on the other hand, can be founded to express an already existing common identity, but for the Greek Sicilian colonies this last scenario is not likely: it cannot be assumed that there existed a colonial identity *before* the actual colonial foundations took place. Naxos was considered the first Greek foundation in Sicily, so it must have taken some time before a colonial identity, like Sikeliotism, developed. The sanctuary of *Apollo Archegetes* would indeed have been the place where *theoroi* of the other Sicilian foundations, once established, offered

sacrifice, before leaving for the mainland, and where a communal, however religious, Sikeliot identity could be forged, and reinforced. The common recognition of the primacy of Naxos among the Sicilian cities, due to its possession of the altar of *Apollo Archegetes*, indicates that an awareness of 'otherness' and 'foundation' in relation to the homeland was quick to develop. Without the actual remains of a sanctuary as a setting for dedications, the beginning of a shared cult is hard to date, but, probably, was established from the (early) 7<sup>th</sup> century BC on, when polis formation, and related identities were well underway in Sicily. As other shared cults, like the Hellenion in Naukratis or the pan-Ionion at Mykale, indicate, shared cult does not completely overlap with harmonious identity or political alliances: the participants at the Hellenion or in Mykale fought wars on several occasions, and identities were negotiated continually.<sup>49</sup>

The political dimension of the identity of the Sikeliotai seems not to have been strictly defined initially, and apparently functioned in a way similar to other identities, like Hellenism. Jonathan Hall characterised Hellenic identity, in the archaic period, as loosely defined, constructed from within the group (an 'aggregative self-definition') based on communally recognised similarities.<sup>50</sup> The crystallisation of a well defined identity was connected to confrontations with an 'Other', in the Hellenic case, the Persians.<sup>51</sup> Similar processes are at work in Sicily. Initially, a Sikeliot identity of a religious nature rose following the shared importance of *Apollo Archegetes* among the Sicilian cities, expressed through *theoria*. This religious identity was not well defined, and lacked a political dimension, and several of the criteria necessary for a well defined regional identity: ethnic identity, as a form of 'imagined kinship', was in ancient Greece typically expressed through cult or genealogy, but no hero or eponym ancestor 'Sikelios' or similar is known in Sicily. The speech that Hermokrates delivered to his fellow Sikeliotai took place in Gela, and not in the shared sanctuary in Naxos. This is significant, and may indicate that regular gathering was not practised at the sanctuary of *Apollo Archegetes* of Naxos. Moreover, Hermokrates' Sikeliotai are an outsider's view: he says 'we are called Sikeliotai'. Hermokrates does not say that there is a communal identity, but that there should be. He goes on, not to say that the Sikeliotai are kinsmen, but that they are neighbours (γείτονας). One would expect the expression of a kinship relation (συγγένεια) of the Sicilian cities if they had been a tight unit.<sup>52</sup> Hermokrates

krates seems to indicate that the union of Sikeliots was improvised, on the occasion of the Athenian invasion. He only confirms that there is an external name and a communal territory, the island Sicily, rather than well-defined ethnic group.

Other criteria for a strictly defined Sikeliotism are lacking as well in the archaic period: there is no Sicilian dialect nor pottery style, architectural style, customs or even synoikism, which could be used to construct a well defined Sikeliot ethnic identity.<sup>53</sup> This indicates that, although there was a sense of belonging-together, a religious identity generated through the cult of *Apollo Archegetes*, and a geographic reality, it took time before a real crystallisation of identity with a political dimension, including a common subscription of a name, took place. To distinguish between the fully developed Sikeliot, or pan-Sikeliot, identity, and the looser congregation of the archaic period, it is proposed here to use the term 'proto-Sikeliot identity'. The transition from proto-Sikeliot identity to Sikeliot identity took place, gradually, from the later 5<sup>th</sup> century BC on.

The rise of a well defined Sikeliot identity is connected to confrontations with an ethnic 'Other'. It was only at the moment of a confrontation with the Athenians, which involved a large part of Sicily, that an appeal to a common, Sikeliot, identity is made by Hermokrates. Greek - native wars, like the battles of Himera, in 480 BC, of Cumae, in 474 BC, or the Ducezian rebellion in the mid-5<sup>th</sup> century BC, may have sharpened consciousness, and may have facilitated ethnogenesis of the Sikeliotai, but they were not yet joint Sicilian enterprises. It is difficult to accept that these events could have given rise to a shared identity, as stated by C. Antonaccio or C. Cardete del Olmo.<sup>54</sup> The confrontations with the Athenians caused a sharpening of boundaries of the proto-Sikeliots, but the support of the Chalkidian colonies, including Naxos, against Syracuse and her allies, shows that Hermokrates' appeal to Sikeliotism had been futile. Forces of sharpening boundaries continued, and the existence of a fully developed Sikeliot ethnic identity is firmly established only from the later 4<sup>th</sup> century on: the eponymous nymph *Sikelia* is attested on several emissions of Alaesa, Hadranum, and probably Herbessos.<sup>55</sup> It is in this context that *Apollo Archegetes*, formerly a symbol monopolised by Naxos and her heirs, gains a political dimension and starts his career as a pan-Sikeliot symbol, preceded by the Tauromenian, and the Timoleontic propaganda.

## CONCLUSION

*Apollo Archegetes* was the focus of the first polis founded in Sicily by Greek colonists, and came under the attention of other colonies, which were quickly founded after the Naxian example. Sacred ambassadors, *theoroi*, offered sacrifice at the Naxian sanctuary, before embarking, and lay at the basis of a religious identity of loose nature of a group which is called here 'proto-Sikeliot'. Based on the available evidence this paper has attempted to show that the cult of *Apollo Archegetes* of Naxos, had an important local role and lacked a political dimension to act as a focus for a well defined pan-Sikeliot ethnic identity. Numismatic evidence shows that the use of the image of *Apollo Archegetes* in the 5<sup>th</sup> century was exclusively related to Naxos, and her daughter-cities Leontinoi and Katane, in a specific historical context of military threat by Syracuse. Other known cults for gods or heroes known as *Archegetes*, like at Kyrene, Athens or Delos, show that the *Archegetes* was intimately connected with the polis, citizenship and civic identity. This was spatially expressed by means of a location of the sanctuary on the agora. The Naxian agora has not yet been excavated, but the textual evidence for the location of the Naxian Archegesion seems to point, indeed, to this part of town, albeit outside the city wall in the second half of the 5<sup>th</sup> century BC. Although the primacy of *Apollo Archegetes* was commonly accepted by the other Sicilian poleis, a firmly established identity, beyond the *theoria*, was absent. This paper has proposed to see the 'proto-Sikeliotai' in way analogous with the evolution of Hellenic identity, which became sharply defined after the Persian Wars and in opposition to the barbarian Other. Crystallisation of the Sikeliot identity took place after the later 5<sup>th</sup> century BC, and was generated through an ethnic Other. This Other was Greek, Athenian, and not barbarian, as has been proposed by some scholars. Hostility towards Athens, rather than a shared cult for *Apollo Archegetes* was the drive behind the rise of a well-defined identity.

*Apollo Archegetes* continued to function on a local political level in Naxos' successor cities, an unspecified one of 'Neopolitai' and then Tauromenion. The use of *Apollo Archegetes* by the Timoleontic *symmachia*, first when Tauromenion became an ally, then by others, meant the beginnings of a widespread use of Apollonian imagery on coinage, and the acquisition of a political dimension. In this period Sikeliot identity was fully developed, as shown by the existence of an eponymous

*Sikelia*. The participation of some 'barbarian' allies in the Timoleontic *symmachia*, and their adoption of the coinage, symbols and meanings included, could point to the fact that the *symmachia*, and probably Sikeliot identity was not purely 'Greek'. This indicates a dissolution of 'Greekness', or the lack of a distinction between Greeks and the indigenous inhabitants, in the Sikeliot self-definition, there where, traditionally, scholars have placed boundaries between Greeks and natives.

## NOTES

\* I would like to thank Clemente Marconi, Robin Osborne, Irad Malkin and Jan Paul Crielaard for their extensive comments on earlier drafts of this paper; all opinions expressed and mistakes remaining are mine. I also would like to thank the *Belgian Historical Institute in Rome* (BHIR/IHBR), foundation Utopa, and the *Fund for Scientific Research Flanders* (FWO - G.0162.06) for their generous financial support.

<sup>1</sup> Thuc. *Hist.* 6.3.1 (Loeb Classical Library).

<sup>2</sup> App. *Bell. Civ.* 5.12.109 (Loeb Classical Library).

<sup>3</sup> The cult title 'Archegetes': Leschhorn 1984, 70-71; Graf 2002; Malkin 2003b. Apollo as *Archegetes*: Leschhorn 1984, 109-114; Malkin 1987, 241-250; Detienne 1998, 105-133.

<sup>4</sup> The Pan-Sikeliot role of *Apollo Archegetes* of Naxos has been amply studied from the 16<sup>th</sup> century on: Fazellus in Statella 1749, 102; Holm 1870, 119; Pace 1945, 534; Lacroix 1965, 139-142; Pugliese Carratelli 1995, 299; Brelich 1964, 45; Malkin 1986, 1987, 19; 2001, 8; Morgan 1990, 176; Antonaccio 2001, 134; Cordano 2004, 96.

<sup>5</sup> On *theoria* see: Rutherford/Elsner 2005, Rutherford, 2007. I. Rutherford identified the Amphikleidai of Sicilian Naxos as the family dominating *theoria* in Delos: Rutherford 1998.

<sup>6</sup> Pan-Sikeliot and Pan-Hellenic *Apollo Archegetes* of Naxos: Malkin 1984-1985, 55; 1986, 1987, 19; 2001, 8; 2003a, 64ff.

<sup>7</sup> The different functions of Apollo of Naxos before he became *Archegetes* in: Malkin 1986, 960, 971. On page 971 Malkin adds also the function of God of Embarkation of ships (*embasios*); Malkin 2003a, 62-63.

<sup>8</sup> Among others: Rizzo 1894, 11; Cahn 1944, 92; Pace 1945, 534; Lacroix 1965, 139-142; Malkin 1984-1985, 55; 1986, 1987, 19; 2001, 8; Morgan 1990, 176.

<sup>9</sup> *Oikistes*: Leschhorn 1984; Malkin 1987; Dougherty 1993a; Antonaccio 1999. Delphi and colonisation: Defradas 1954; Forrest 1957; Fontenrose 1978, 49-81; Leschhorn 1984, 86; Malkin 1987, 17-91; Morgan 1990, 172-178; Londey 1990; Dougherty 1993a; 1993b, 18; Rougemont 1995, 173-177. On Greek colonisation exists a vast bibliography; a useful general introduction can be found in: Boardman 1964; Tsatskheladze 2008. The Delphic oracle in general: Parke/Wormell 1954; Roux 1971; Fontenrose 1978; Parker 1985. For a recent approach to space in the sanctuary of Apollo in Delphi: Scott 2010. Apollo in general: Graf 2009.

<sup>10</sup> Van Compernelle 1950-1951, 181-183; Brelich 1964, 45; Kontoleon 1967; Valenza Mele 1977, 508; Brugnone 1980; Martorana 1980-1981, 368-369; Van Compernelle 1984-1985, 34; Martorana et al. 1996, 51; Guarducci 1985, 20; 1996, 15; Lentini 2001, 5; Cordano 2004 (this list is not meant to be exhaustive).

<sup>11</sup> Significant is the reference of Hellanicus *FGrHist* 4 F 82,

which could be read in this sense, and a dedication to *Enyō*, discussed by Guarducci 1985 (see also note 15). The foundation of Naxos in the ancient sources is briefly discussed in Pelagatti 1993, 265. See also Cordano 1984-1985. See Pelagatti 1993, and Fisher-Hansen/Nielsen/Ampolo 2004, 218-220 for an overview of the archaeological discoveries and for further bibliographical references.

<sup>12</sup> Delos as birth place of Apollo: *Hom. Hymn to Apollo*, v. 1-139. Delos in general: Bruneau/Ducat 2005 (with references to the older publications). Naxian architecture and sculpture in Delos: Gruben 1997; Bruneau/Ducat 2005, 172-173, 177-182, 226 (with earlier bibliography).

<sup>13</sup> Costa 1997, 100; The imperial evidence for an oracle at Delos: Bruneau 1970, 142-161. Bruneau/Ducat 2005, 51. The Delian oracle in the foundation of Naxos in Sicily: Cordano 1997, 177. The earliest pottery in Naxos: Pelagatti 1982.

<sup>14</sup> Murray 1993, 113.

<sup>15</sup> *Apollo Archegetes* and the statue of Saint Pancratius: Ferrara 1805, 113-114; Holm 1870, 119. Contra: Rizzo 1894, 108. *Apollo Archegetes* in Scialia: Gentili 1956. The archaeology of Naxos: Pelagatti 1993; Lentini 2001; Lentini 2004; Lentini 2009. On *Enyō*: Pelagatti 1980-1981, 696-697, 706; 1993, 281; Guarducci 1985.

<sup>16</sup> Mykale: Hdt. 1.170; Delos: *Hom. Hymn to Apollo* 3.147; 152. The Achaean League: Polyb. *Hist.* 2.54.3. For Ionian identity see: Hall 2002, 67-72; Crielaard 2009. For Achaean identity: Morgan 2002 (with further references).

<sup>17</sup> There exists a vast bibliography on Olympia, Delphi and Hellenic identity. See summary work of Hall 1997, 2002. Recently: Scott 2010, 250-273.

<sup>18</sup> Bibliography see note 4.

<sup>19</sup> Constantakopoulou 2005. See also: Lätsch 2005.

<sup>20</sup> Morgan 1990, 127, 134. The beginning of Delphi is deduced from the presence of bronze tripods, of ca 800 BC: Rolley 1977. The earliest ceramics are of the mid 8<sup>th</sup> century BC: Pedrizet 1908; Neef 1981. The widening of the range of ceramics, from ca the last quarter of the 8<sup>th</sup> century BC on, is taken by Morgan 1990, 134 as beginning of the functioning of the oracle.

<sup>21</sup> *Proxenos* for consultation: Sourvinou-Inwood 1990, 297; *proxenia* in general: Marek 1984, specifically on Delphi: 164-216. Spatial organisation of the sanctuary at Delphi: Scott 2010. On the Sacred Wars: Weeber 2008 (with bibliography).

<sup>22</sup> The foundation of Leontinoi: Thuc. *Hist.* 6.3.3, 6.4.1, Polyae. *Strat.* 5.5, Diod. *Bibl. Hist.* 12. 53.1, Callim. *fr.* 43, 36 (Pfeiffer), Ps. Scymn. *Per. Nic.* 283, Strabo *Geogr.* 6.2.7. On Leontinoi in general see: Rizza 1990, Fisher-Hansen/Nielsen/Ampolo 2004, 209-211; most recent: Frasca 2009. The foundation of Katane: Thuc. *Hist.* 6.3.3, Strabo 6.2.3, Steph. Byz. s.v. Katane. For Katane in general see: Rizza 1987, Fisher-Hansen/Nielsen/Ampolo 2004, 206-207.

<sup>23</sup> The coinage of Leontinoi: Boehringer 1998; Fisher-Hansen/Nielsen/Ampolo 2004, 210; Frasca 2009, 115-117.

<sup>24</sup> The coinage of Katane: Manganaro 1996 (with earlier bibliography), Fisher-Hansen/Nielsen/Ampolo 2004, 207.

<sup>25</sup> The coinage of Naxos: Cahn 1944; Fisher-Hansen/Nielsen/Ampolo 2004, 220.

<sup>26</sup> For coinage in Sicily in general: Consolo Langher 1964 (with ample earlier bibliography), more recent is: Rutter 1997. On coinage and identity: Rutter 2000, Papadopoulos 2002.

<sup>27</sup> Diod. *Bibl. Hist.* 11.49.1-2, 76.3. On the return of the inhabitants: Asheri 1980.



- <sup>28</sup> Cahn 1944, 146; Consolo Langher 1964, 167-8. See also: Calderone 1956; Fisher-Hansen/Nielsen/Ampolo 2004, 220. The close connection between Naxos and the Neopolitai is generally accepted. The coinage of Tauromenion: Consolo Langher 1964, 179-181; Fisher-Hansen/Nielsen/Ampolo 2004, 232. For Tauromenion in general see: Fisher-Hansen/Nielsen/Ampolo 2004, 231-232.
- <sup>29</sup> The coinage of Hadranon, Tyndaris and the *symmachia*: Consolo Langher 1964, 181-186.
- <sup>30</sup> Diod. *Bibl. Hist.* 16, 65-70, 72-73, 77-83, 90; Plut. *Timol.* For Timoleon see: Sordi 1961; Westlake 1994.
- <sup>31</sup> Indigenous allies of the *symmachia*: Diod. *Bibl. Hist.* 73, 2: Many of the Sikeli cities sent embassies with the request to be included in the *symmachia*.
- <sup>32</sup> The propaganda of Timoleon: Melita Pappalardo 1996.
- <sup>33</sup> On foundation narratives, see several examples by Malkin 1994, 1998a, 5; Malkin 1998b, Dougherty 1993b, 4; 1994; Giangiulio 2001, 119-120; Calame 2003; Corcella 2006, 34.
- <sup>34</sup> The staging of foundation stories: Dougherty 1993b, 27 n. 1, 83-156; 1994, 35; Bowie 1986.
- <sup>35</sup> A tomb of the *oikistes* on the agora is attested in: Kyrene: Stucchi 1965, 58-65, 111-114; Poseidonia: Greco/Theodorescu 1983, 25-33; Greco 1994. In Selinunte a cult place was identified on the agora: Mertens 2003, 407-408, as well as in Megara Hyblaea: Gras/Tréziny 2001, 59-62. In Taranto the remains of the cremated *oikistes* were scattered on the agora: Polyb. *Hist.* 8, 30. The role of the cult of the founder for the identity of colonies is discussed by: Leschhorn 1984, 98-104; Malkin 1987, part 2; Antonaccio 1999; Kenzler 2000, 27. The role of the agora in the polis: Martin 1951; Kenzler 2000; Hansen 2004, 138-143. A recent study of temple sculpture and its link with foundation myths in Sicily: Marconi 2007.
- <sup>36</sup> For the career of Theokles after the foundation of Naxos see: Malkin 2002, 209-210. Malkin, however, does not consider the cultic implications for Naxos after the leaving of Theokles.
- <sup>37</sup> Thuc. *Hist.* 6.3.3 (Loeb Classical Library).
- <sup>38</sup> For example in Thurioi: Diod. *Bibl. Hist.* 12.35.2; see also Sachar 2002 for other examples of Apollo and colonisation.
- <sup>39</sup> The agora of Thasos: Martin 1959.
- <sup>40</sup> Lentini 2009, 49. For the ship sheds see: Blackman/Lentini 2003, 2006. Urbanisation of Naxos: see overview in Pelagatti 1993 (with bibliography).
- <sup>41</sup> On the agora of Naxos: Lentini 2009, 10, 49-50 (with earlier bibliography).
- <sup>42</sup> App. *Bell. Civ.* 5.12.109 (Loeb Classical Library). A similar conclusion based on Appian's reference has been reached by Pelagatti 1978, 138 and Valenza Mele 1977, 505.
- <sup>43</sup> See note 1.
- <sup>44</sup> *Apollo Archegetes* in Kyrene: Pind. *Pyth.* 5.60, SEG 9.3.11. *Battos Archegetes*: SEG 9, 3, 27; 72, 5, 2. *Temenos of Apollo Archegetes*: Purcaro 2001, 25-45. The heroön of Battos see: Stucchi 1965, 58-65, 111-114. For other buildings with civic functions on the agora of Kyrene: the *prytaneion*: Purcaro 2001, 49-56; the *hestiatorion*: Bacchielli 1981, 48-50. *Athena archegetis*: Plut. *Alkib.* 2; Aristid. *Rhet.* I 608 Dindf., Schol. Aristoph. *Vög.* 515. The eponymous heroes: Arist. *Pol. Ath.* 21, 6. See also: Thompson/Wycheley 1972, 38-41 (with references to earlier publications) for the monument of the eponymous heroes.
- <sup>45</sup> Anios in general: Bruneau 1970, 413-420. The Archegeion: Robert 1953; Prost 1997; Bruneau/Ducat 2005, 52. The prohibition for xenoi is studied by: Butz 1994; 1996.
- The attribution of the building as sanctuary for Anios is doubted by: Brugnone 1980, 291 n. 71. She thinks that the Archegeion might have been dedicated to *Apollo Archegetes*. The only secure attestation of *Apollo Archegetes* in Delos is in an inscription of the 2<sup>nd</sup> century BC (ID 1506, ll. 11-12), however.
- <sup>46</sup> Thuc. *Hist.* 4.64.2-3 (Loeb Classical Library).
- <sup>47</sup> Ethnic identity and Sicily: Malkin 1986, 1987, 19; 2001, 8; Morgan 1990, 176; Antonaccio 2001, 134; Cordano 2004, 96. Contra: Hall 2004, 46, Shepherd 2005, 442, Cardete del Olmo 2008.
- <sup>48</sup> Definitions of ethnicity: Jones 1997, xiii; Hall 1997, 19-26; 2002, 9-19. Both authors provide for an extensive introduction into the relevant anthropological scholarship. Greek ethnicity: Hall 1997, 2004, Malkin 2001, 2003a, Lomas 2004, Mitchel 2005, Osborne 2005, Snodgrass 2005. A critique of the dominance of ethnic identity as the basis of every group identity: Mac Sweeney 2009.
- <sup>49</sup> On Naukratis see recently: Höckermann/Möller 2006. On Mykale: Crielgaard 2009.
- <sup>50</sup> Hall 1997, 46-47.
- <sup>51</sup> Of a vast bibliography: Hall 1989 for the creation of an anti-barbarian identity in tragedy; Hall 2002 sees a decisive role in the anti-barbarian sentiments after the Persian invasions for the Hellenic identity in general; recently: Mitchell 2007.
- <sup>52</sup> On relations between Greek poleis: Giovannini 2007.
- <sup>53</sup> On Sicilian material culture and identity in general see different contributions in: Pugliese Caratelli 1985; with Antonaccio 2001, 2004; and Mertens 1990, 2006 on architecture.
- <sup>54</sup> Antonaccio 2001, 121-122; Cardete del Olmo 2008.
- <sup>55</sup> Sikeliä on coinage: Consolo Langher 1964, 185-186, 197. City-ethnics represented by nymphs on coins occur more frequently in Sicily, see: Zisa 1993.

## BIBLIOGRAPHY

- Antonaccio, C.M. 1999. Colonization and the Origins of Hero Cult, in R. Hägg (ed.), *Ancient Greek Hero Cult. Proceedings of the Fifth International Seminar on Ancient Greek Cult, Organised by the Department of Classical Archaeology and Ancient History, Göteborg University 21-24 April 1995*, Stockholm, 109-121.
- Antonaccio, C.M. 2001. Ethnicity and Colonization, in I. Malkin (ed.), *Ancient Perceptions of Greek Ethnicity*, Cambridge, Massachusetts/Washington, D.C., 113-157.
- Antonaccio, C. 2004. Siculo-Geometric and the Sikels, in C. Morgan/B. Shefton (eds), *Greek Identity in the Western Mediterranean, Studies in Honour of Brian Shefton*, Leiden, 55-81.
- Asheri, D. 1980. Rimpatrio degli Esuli e Ridistribuzione di Terre nelle Città Siceliote ca. 466-461 a.C., in *Filiä Kharin. Miscellanea di Studi Classici in Onore di E. Manni*, Rome, 143-157.
- Bacchielli, L. 1981. *L'Agora di Cirene II, 1: L'Area Settenzionale del Lato Ovest della Platea Inferiore*, Rome.
- Blackman, D./M.C. Lentini. 2003. The Ship Sheds of Sicilian Naxos, *Researches* 1998 - 2001. A Preliminary Report, BSA 98, 387-435.
- Blackman, D./M.C. Lentini. 2006. An Ancient Greek Dockyard in Sicily, in *Die neue Sicht. Unterwasserarchäologie und Geschichtsbild. Akten des 2. Internationalen Kongresses für Unterwasserarchäologie. Rüschlikon bei Zürich, 21. - 24. Oktober 2004. Une nouvelle Interprétation de l'Histoire. L'Apport de l'Archéologie Subaquatique. Actes du 2e Congrès International d'Archéologie Subaquatique. The New*

- View. *Underwater Archaeology and the Historical Picture. Proceedings of the 2nd International Congress on Underwater Archaeology*, Basel, 193-197.
- Boardman, J. 1964, *The Greeks Overseas*, London.
- Boehrer, C. 1998, Zur Münzgeschichte von Leontinoi in klassischer Zeit, in R. Ashton/S. Hurte, *Studies in Greek Numismatics in Memory of Martin Jessop Price*, London, 43-53.
- Bowie, E. 1986, Early Greek Elegy, Symposium, and Public Festivals, *JHS* 106, 13-35.
- Brelich, A. 1964, La Religione Greca in Sicilia, *Kokalos* 10-11, 35-54.
- Brugnone, A. 1980, Annotazioni sull'Apollo Archegete di Naxos, in *Filias Kharin. Miscellanea di Studi Classici in Onore di E. Manni*, Rome, 277-294.
- Bruneau, P. 1970, *Recherches sur les Cultes de Délos à l'Epoque Hellénistique et à l'Epoque Impériale*, Paris.
- Bruneau, P./J. Ducat 2005, *Guide de Délos*, Paris.
- Butz, P. 1994, The Double Publication of a Sacred Prohibition on Delos: ID 68, A and B, *BCH* 118, 69-98.
- Butz, P. 1996, Prohibitionary Inscriptions, Xenoi, and the Influence of the Early Greek polis, in R. Hägg (ed.), *The Role of Religion in the Early Greek Polis. Proceedings of the Third International Seminar on Ancient Greek Cult, Organized by the Swedish Institute at Athens, 16-18 October 1992*, Stockholm, 75-95.
- Cahn, H.A. 1944, *Die Münzen der griechischen Stadt Naxos. Ein Beitrag zur Kunstgeschichte des griechischen Westens*, Basel.
- Calame, C. 2003, *Myth and History in Ancient Greece. The Symbolic Creation of a Colony*, Princeton, NJ.
- Calderone, S. 1956, I Neopolitani di Tauromenio, in *Studi in onore di A. Calderini e R. Paribeni*, Milan, 69-78.
- Cardete del Olmo, C. 2008, De Griegos a Siceliotas. La Dimensión 'Etnica del Congreso de Gela, *ASAtene* 86, 153-167.
- Consolo Langher, S. 1964, *Contributo alla Storia dell'Antica Monetazione Bronzea in Sicilia*, Milan.
- Constantakopoulou, C. 2005, Proud to Be an Islander: Island Identity in Multi-Polis Islands in the Classical and Hellenistic Aegean, *MedHistR* 20, 1-34.
- Corcella, A. 2006, The New Genre and its Boundaries: Poets and Logographers, in A. Rengakos/A. Tsakmakis (eds), *Brill's Companion to Thucydides*, Leiden, 33-56.
- Cordano, F. 1984-85, Le Fonti Letterarie per la Storia di Naxos, *NSA* 38-39, 305-316.
- Cordano, F. 1997, Le Cicladi e la Colonizzazione, in G. Bartoloni (ed.), *Le Necropoli Arcaiche di Veio. Giornata di Studio in Memoria di Massimo Pallottino*, Rome, 175-178.
- Cordano, F. 2004, Naxos di Sicilia e l'Egeo, in M.C. Lentini (ed.), *Le Due Città di Naxos. Atti del Seminario di Studi, Giardini Naxos 29-31 ottobre 2000*, Palermo, 100-105.
- Costa, V. 1997, *Nasso, dalle origini al V sec. a.C.*, Rome.
- Crielaard, J.P. 2009, The Ionians in the Archaic period. Shifting Identities in a Changing World, in T. Derks/N. Roymans (eds), *Ethnic Constructs in Antiquity. The Role of Power and Tradition*, Amsterdam, 37-84.
- Defradas, J. 1954, *Les Thèmes de la Propagande Delphique*, Paris.
- Detienne, M. 1998, *Apollon le Couteau à la Main. Une Approche Expérimentale du Polythéisme Grec*, Paris.
- Dougherty, C. 1993a, It's Murder to Found a Colony, in C. Dougherty/L. Kurke (eds), *Cultural Poetics in Archaic Greece. Cult, Performance, Politics*, Cambridge, 178-198.
- Dougherty, C. 1993b, *The Poetics of Colonization: From City to Text in Archaic Greece*, New York.
- Dougherty, C. 1994, Archaic Greek Foundation Poetry: Questions of Genre and Occasion, *JHS* 114, 35-46.
- Ferrara, F. 1805, *Memorie sopra il Lago Naftia nella Sicilia Meridionale, sopra il Miele Ibleo e la Città di Ibla Megara sopra Nasso e Callipoli*, Palermo.
- Fisher-Hansen, T./T.H. Nielsen/C. Ampolo 2004, *Sikelia*, in M.H. Hansen/T.H. Nielsen (eds), *An inventory of Archaic and Classical Poleis*, Oxford, 172-248.
- Fontenrose, J. 1978, *The Delphic Oracle. Its Responses and Operations*, Berkeley/Los Angeles.
- Forrest, W.G. 1957, Colonisation and the Rise of Delphi, *Historia* 6, 160-175.
- Frasca, M. 2009, *Leontinoi. Archeologia di una Colonia Greca*, Rome.
- Gentili, G. V. 1956, Naxos alla Luce dei Primi Scavi, *BdA* 41, 326-333.
- Giangiulio, M. 2001, Constructing the Past: Colonial Traditions and the Writing of History. The case of Cyrene, in N. Luraghi (ed.), *The Historian's Craft in the Age of Herodotus*, London/New York, 116-137.
- Giovannini, A. 2007, *Les Relations entre l'Etat dans la Grèce Antique du Temps d'Homère à l'Intervention Romaine (ca. 700-200 av. J.-C.)*, Stuttgart.
- Graf, F. 2002, Archegetes, in H. Cancik/H. Schneider (eds), *Brill's New Pauly*, Leiden, 980-981.
- Graf, F. 2009, *Apollo*, London.
- Gras, M./H. Tréziny 2001, Mégara Hyblaea. Retours sur l'Agora, in E. Greco (ed.), *Architettura, Urbanistica, Società nel Mondo Antico. Giornata di Studi in Ricordo di Roland Martin, 21 Febbraio 1998*, Paestum, 51-63.
- Greco, E. 1994, L'agora de Posidonia: une Mise au Point, *CRAI* 94, 227-237.
- Greco, E./D. Theodorescu 1983, *Poseidonia - Paestum. II. L'agora*, Rome.
- Gruben, G. 1997, Naxos und Delos, *JdI* 112, 261-416.
- Guarducci, M. 1985, Una Nuova Dea a Naxos in Sicilia e gli Antichi Legami fra la Naxos Siceliota e l'Omonima Isola delle Cicladi, *MEFRA* 97, 7-34.
- Guarducci, M. 1996, Apollo di Delfi o Apollo di Delo? Contributo alla Storia di Naxos Cicladica e Siceliota, in E. Lanzillotta/D. Schilaroli (eds), *Le Cicladi ed il Mondo Egeo. Seminario Internazionale di Studi, Roma, 19-21 Novembre 1992*, Rome, 13-19.
- Hall, E. 1989, *Inventing the Barbarian. Greek Self-Definition Through Tragedy*, Oxford.
- Hall, J. 1997, *Ethnic Identity in Greek Antiquity*, Cambridge.
- Hall, J. 2002, *Hellenicity. Between Ethnicity and Culture*, London.
- Hall, J. 2004, How Greek Were the Early Western Greeks?, in C. Lomas/B. Shefton (eds), *Greek Identity in the Western Mediterranean. Papers in Honour of Brian Shefton*, Leiden, 35-54.
- Hansen, H.M. 2004, Introduction, in H.M. Hansen/T.H. Nielsen (eds), *An Inventory of Archaic and Classical Poleis*, Oxford, 3-153.
- Höckermann, U./A. Möller 2006, The Hellenion at Naukratis. Questions and Observations, in A. Villing/U. Schlotzhauer (eds), *Naukratis. Greek Diversity in Egypt. Studies on East Greek Pottery and Exchange in the Eastern Mediterranean*, Oxford, 11-22.
- Holm, A. 1870, *Geschichte Siciliens im Alterthum*, Leipzig.
- Jones, S. 1997, *The Archaeology of Ethnicity. Constructing Identities in the Past and Present*, London/New York.
- Kenzler, U. 2000, Vom dörflichen Versammlungsort zum urbanen Zentrum. Die Agora im Mutterland und in den Kolonien, in F. Krinzinger (ed.), *Die Ägäis und das westliche Mittelmeer. Beziehungen und Wechselwirkungen 8. bis 5. Jh. v.Chr. Akten des Symposiums, Wien 24. bis 27. März 1999*, Vienna, 23-28.

- Kontoleon, N.M. 1967, Zur Gründung von Naxos und Megara auf Sizilien, in W.C. Brice, (ed.), *Europa. Studien zur Geschichte und Epigraphik der frühen Aegaeis. Festschrift für Ernst Grumach*, Berlin, 181-190.
- Lacroix, L. 1965, *Monnaies et Colonisation dans l'Occident Grec*, Brussels.
- Lätsch, F. 2005, *Insularität und Gesellschaft in der Antike: Untersuchungen zur Auswirkung der Insellage auf die Gesellschaftsentwicklung*, Stuttgart.
- Lentini, M.C. (ed.) 2001, *The Two Naxos Cities: a Fine Link Between the Aegean Sea and Sicily. Exposition, 14-30 June 2001, University of Athens (Central Building, Kontos Room), 6-31 July 2001, Archaeological Museum, Isle Naxos, Palermo*.
- Lentini, M.C. (ed.) 2004, *Le Due Città di Naxos. Atti del Seminario di Studi, Giardini Naxos, 29-31 Ottobre 2000*, Florence/Milan.
- Lentini, M.C. 2009, *Naxos di Sicilia. L'Abitato Coloniale e l'Arsenale Navale. Scavi 2003-2006*, Messina.
- Leschhorn, W. 1984, *Gründer der Stadt. Studien zu einem politisch-religiösen Phänomen der griechischen Geschichte*, Stuttgart.
- Lomas, K. 2004, Introduction, in C. Lomas/B. Shefton (eds), *Greek Identity in the Western Mediterranean. Papers in Honour of Brian Shefton*, Leiden, 1-14.
- Londay, P. 1990, Greek Colonists and Delphi, in J.-P. Descœudres (ed.), *Greek Colonists and Native Populations. Proceedings of the First Australian Congress of Classical Archaeology, Sydney 9 - 14 July 1985*, Oxford, 117-127.
- Mac Sweeney, N. 2009, Beyond Ethnicity. The Overlooked Diversity of Group Identities, *JMedA* 22, 1, 101-126.
- Malkin, I. 1984-85, Dieux et Colons dans la Sicile Archaique, *Kokalos* 30-31, 155-159.
- Malkin, I. 1986, Apollo Archegetes and Sicily, *AnnPisa* 16, 959-972.
- Malkin, I. 1987, *Religion and Colonisation in Ancient Greece*, Leiden.
- Malkin, I. 1994, *Myth and Territory in the Spartan Mediterranean*, Cambridge.
- Malkin, I. 1998a, The Middle Ground: Philoktetes in Italy, *Kernos* 11, 131-141.
- Malkin, I. 1998b, *The Return of Odysseus. Colonization and Ethnicity*, Berkeley.
- Malkin, I. 2001, Introduction, in I. Malkin (ed.) *Ancient Perceptions of Greek Ethnicity*, Cambridge, Mass./Washington, D.C., 1-28.
- Malkin, I. 2002, Exploring the Validity of the Concept Foundation. A Visit to Megara Hyblaia, in E. Robinson/V. Gorman (eds), *Oikistes. Studies in Constiutions, Colonies and, Military Power in the Ancient World. Offered in Honour of A.J. Graham*, Leiden, 195-225.
- Malkin, I. 2003a, Networks and the Emergence of Greek Identity, *MedHistR* 18, 56-74.
- Malkin, I. 2003b, Archegetes, in S. Hornblower/A. Spawforth (eds), *The Oxford Classical Dictionary* (3rd ed.), 143.
- Manganaro, G. 1996, Appendice - La Monetazione di Katane dal V al I sec. a.C., in B. Gentili, (ed.) *Catania Antica. Atti del Convegno della S.I.S.A.C., Catania 23-24 Maggio 1992*, Pisa/Rome, 303-320.
- Marconi, C. 2007, *Temple Decoration and Cultural Identity in the Archaic Greek World. The Metopes of Selinus*, Cambridge.
- Marek, C. 1984, *Die Proxenie*, Frankfurt am Main.
- Martin, R. 1951, *Recherches sur l'Agora Grecque. Études d'Histoire et d'Architecture Urbaines*, Paris.
- Martin, R. 1959, *L'Agora*, Paris.
- Martorana, G. 1980-1981, Religioni, *Kokalos* 26-7, 359-381.
- Martorana, G./F. Angelini/N. Cusumano/R. Greco 1996, *Dizionario dei Culti e Miti nella Sicilia Antica vol. I (Fonti Letterarie)*, Palermo.
- Melita Pappalardo, R.M. 1996, Caratteri della Propaganda Timoleontea nella Prima Fase della Spedizione in Sicilia, *Kokalos* 42, 263-273.
- Mertens, D. 1990, Some Principal Features of West Greek Colonial Architecture, in J.-P. Descœudres, (ed.), *Greek Colonists and Native Populations. Proceedings of the First Australian Congress of Classical Archaeology, Sydney 9 - 14 July 1985*, Oxford, 373-383.
- Mertens, D. 2003, Die Agora von Selinunt. Neue Grabungsergebnisse zur Frühzeit der griechischen Kolonialstadt. Ein Vorbericht, *RM* 110, 389-412.
- Mertens, D. 2006, *Città e Monumenti dei Greci d'Occidente. Dalla Colonizzazione alla Crisi di Fine V Secolo a.C.*, Rome.
- Mitchell, L. 2005, Ethnic Identity and the Community of the Hellenes: a review, *AncWestEast* 4, 409-420.
- Mitchell, L. 2007, *Panhellenism and the Barbarian in Archaic and Classical Greece*, Swansea.
- Morgan, C. 1990, *Athletes and Oracles. The Transformation of Olympia and Delphi in the Eighth Century BC*, Cambridge.
- Morgan, C. 2002, Ethnicity. The Example of Achaea, in E. Greco (ed.), *Gli Achei e l'Identità Etnica degli Achei d'Occidente. Atti del Convegno Internazionale di Studi, Paestum, 23-25 Febbraio 2001*, Paestum, 95-116.
- Murray, O. 1993, *Early Greece*, London.
- Neeft, C. 1981, Observations on the Thapsos Class, *MEFRA* 93, 7-88.
- Osborne, R. 2005, The Good of Ethnicity, *AncWestEast* 4, 430-431.
- Pace, B. 1945, *Arte e Civiltà della Sicilia Antica*, Milan.
- Papadopoulos, J. 2002, Minting Identity: Coinage, Ideology and the Economics of Colonization in Akhaian Magna Graecia, *CAJ* 12, 21-55.
- Parke, H.W./D.E.W. Wormell 1956, *A History of the Delphic Oracle*, Oxford.
- Parker, R. 1985, Greek States and Greek Oracles, in P.A. Cartledge/F.D. Harvey, *Crux. Essays in Greek History Presented to G.E.M. de Ste Croix on his 75 birthday*, London, 298-326.
- Pedrizet, P. 1908, *Monuments Figurés, Arts Mineurs*, Paris.
- Pelagatti, P. 1978, Naxos nell'VIII e nel VII Secolo a.C., *CronA* 17, 136-141.
- Pelagatti, P. 1980-1981, L'Attività della Soprintendenza alle Antichità della Sicilia Orientale, II. *Kokalos* 26-27, 694-730.
- Pelagatti, P. 1982, I Più Antichi Materiali di Importazione a Siracusa, a Naxos e in Altri Siti della Sicilia Orientale, in: *La Céramique Grecque ou de Tradition Grecque au VIIIe siècle en Italie Centrale et la Méridionale*, Naples, 113-180.
- Pelagatti, P. 1993, Nasso. Storia della Ricerca Archeologica, in G. Nenci/G. Vallet (eds), *Bibliografia Topografica della Colonizzazione Greca in Italia e nelle Isole Tirreniche*, Pisa/Rome, 268-312.
- Prost, F. 1997, Archégésion (GD 74), *BCH* 121, 785-789.
- Pugliese Caratelli, G. (ed.) 1985, *Sikanie. Storia e Civiltà della Sicilia Greca*, Rome.
- Pugliese Caratelli, G. 1995, I Santuari Panellenici e le Apoiikiai in Occidente, in *La Magna Grecia e i Grandi Santuari della Madrepatria. Atti del Trentunesimo Convegno di Studi sulla Magna Grecia, Taranto 4 - 8 ottobre 1991*, Taranto, 297-307.
- Purcaro, V. 2001, *L'Agora di Cirene 2.3. L'Area Meridionale del Lato Ovest dell'Agora*, Rome.
- Rizza, G. 1987, Catania. Storia della Ricerca Archeologica, in G. Vallet/G. Nenci (eds), *Bibliografia Topografica della Colonizzazione Greca in Italia e nelle Isole Tirreniche*, Pisa/Rome, 157-66.



- Rizza, G. 1990, Leontini. Storia della Ricerca Archeologica, in G. Vallet/ G. Nenci (eds), *Bibliografia Topografica della Colonizzazione Greca in Italia e nelle Isole Tirreniche*, Pisa/Rome, 533-538.
- Rizzo, P. 1894, *Naxos Siceliota. Storia, Topografia, Avanzi*, Monete, Catania.
- Robert, F. 1953, Le Sanctuaire de l'Archégète Anios à Delos, *RA* 41, 8-40.
- Rolley, C. 1977, *Les Trépieds à Cuve Clouée*, Paris.
- Rougemont, G. 1995, Delphes et les Cités Grecques d'Italie du Sud et de Sicile, in *La Magna Grecia e i Grandi Santuari della Madrepatria. Atti del Trentunesimo Convegno di Studi sulla Magna Grecia, Taranto 4 - 8 Ottobre 1991*, Tarantum, 157-192.
- Roux, G. 1971, *Delphi. Orakel und Kultstätten*, Munich.
- Rutherford, I. 1998, The Amphikleidai of Sicilian Naxos: Pilgrimage and Genos in the Temple Inventories of Delos, *ZPE* 122, 81-89.
- Rutherford, I. 2007, Network Theory and Theoric Networks, *MedHistR* 22, 23-37.
- Rutherford, I./J. Elsner (eds) 2005, *Pilgrimage in Graeco-Roman and Early Christian Antiquity*, Oxford.
- Rutter, N.K. 1997, *The Greek Coinages of Southern Italy and Sicily*, London.
- Rutter, N.K. 2000, Coin Types and Identity: Greek Cities in Sicily, in C. Smith/J. Serrati (eds), *Sicily from Aeneas to Augustus. New Approaches in Archaeology and History*, Edinburgh, 73-83.
- Sachar, I. 2000, Greek Colonization and the Eponymous Apollo, *MedHistR* 15.2, 1-26.
- Scott, M. 2010, *Delphi and Olympia. The Spatial Politics of Panhellenisms in the Archaic and Classical Periods*, Cambridge.
- Shepherd, G. 2005, Hellenicity: More Views from the Margins, *AncWestEast* 4, 437-445.
- Snodgrass, A. 2005, Sanctuary, Shared Cult and Hellenicity: an Archaeological Angle, *AncWestEast* 4, 432-436.
- Sordi, M. 1961, *Timoleonte*, Palermo.
- Sourvinou-Inwood, C. 1990, What is Polis Religion?, in O. Murray/S. Price (eds), *The Greek City from Homer to Alexander*, Oxford, 295-322.
- Statella, S. 1749, F. Thomae Fazelli. *De Rebus Siculis*, Catane.
- Stucchi, S. 1965, *L'Agora di Cirene*, Rome.
- Thompson, H.A./R.E. Wycherley 1972, *The Agora of Athens. The History, Shapes and Uses of an Ancient City Centre*, Princeton/New Jersey.
- Tsetschladze, G.R. (ed.) 2008, *Greek Colonisation. An Account of Greek Colonies and Other Settlements Overseas* 1, Leiden.
- Valenza Mele, N. 1977, Hera ed Apollo nella Colonizzazione Euboica d'Occidente, *MEFRA* 89, 494-524.
- Van Compernelle, R. 1950-1951, La Fondation de Naxos et les Sources Littéraires. Contribution à l'Histoire de la Colonisation Grecque en Sicile, *BBelgRom* 26, 163-185.
- Van Compernelle, R. 1984, La Sicilia Antica e la Grecia Arcaica Fino alla Fine del VI Secolo: l'Apporto delle Fonti Letterarie, *Kokalos* 30-31, 23-53.
- Weeber, K.-W., 2008, s.v. Sacred Wars, in H. Cancik/H. Schneider, *Brill's New Pauly*, Leiden, 830-831.
- Westlake, H.D. 1994, Dion and Timoleon, in D.M. Lewis/J. Boardman/S. Hornblower/M. Ostwald (eds), *The Cambridge Ancient History*, Cambridge, 693-722.
- Zisa, A.D. 1993, Le Ninfe sulle Monete della Sicilia Antica, in T. Hackens/G. Moucharte (eds), *Proceedings of the XIth International Numismatic Congress, vol. I. Monnaies Grecques et Grecques d'Epoque Impériale*, Louvain-la-Neuve, 85-90.

DEPARTEMENT OF ARCHAEOLOGY  
GHENT UNIVERSITY  
ST.-PIETERSNIEUWSTRAAT 35  
B-9000 GENT  
lieve.donnellan@ugent.be

# Marmora Splendida

## *Marble and Marble Imitation in Domestic Decoration - Some Case Studies from Pompeii and Herculaneum*

Suzanne van de Liefvoort

### Abstract

*In the decoration of Roman houses we come across the use of real marble as well as the application of marble imitation. Analyzing the well-preserved cities of Pompeii and Herculaneum a striking difference can be detected with regard to these two types of decoration. The analysis shows that in the case of Pompeii people made well-considered choices regarding the types of marble that were used or imitated following the old republic values, while in the case of Herculaneum the inhabitants were more progressive in following the decorative trends that spread from Rome towards the rest of ancient Italy.*

### INTRODUCTION

The modern word 'luxury' derives from the Latin term *luxuria*, which literally means 'urge for luxury'. Roman authors of the Republic and early Imperial period criticized every form of *luxuria*, since they feared the deterioration of Roman morals and, consequently, the impairment of the Roman state.<sup>1</sup> In spite of their criticism, the authors could not prevent that, during the period of expansion, an ever-increasing import of luxury products arose from conquered provinces to the heart of the empire. In only a few decades, luxury and wealth became concepts that defined social status and, as a result, turned into essential elements in the private lives of prominent Roman citizens.

One of the luxury products that became increasingly popular in the late Republic and the early imperial period was marble. The Romans were first introduced to this type of stone through their fascination for the Alexandrian culture. Soon, small amounts of white and colored marbles were brought to Rome. Because of its scarcity, in the remaining areas of the Italic peninsula the use of marble was highly restricted, if not absent, in the late Republic. Inhabitants of cities outside of Rome, however, were by then familiar with the existence of this new luxury ware and the value it had for the definition of social status. In order to find a way to go along with this new whim of fashion without having access to the actual product, people from these cities started to imitate marble in wall paintings.

With the incorporation of several regions in the empire (most importantly Greece, North-Africa

and Asia Minor), the import and use of white and colored marbles increased gradually. As a result, marble decorations started to occur in houses in cities outside of Rome in the course of the 1<sup>st</sup> century AD. Nevertheless, marble imitations in wall paintings remained present and they even developed from unrecognizable to very realistic and identifiable imitations. In this article, I intend to focus on the apparent discrepancy between the increasing availability of white and colored marbles on the one hand and the persistent trend of

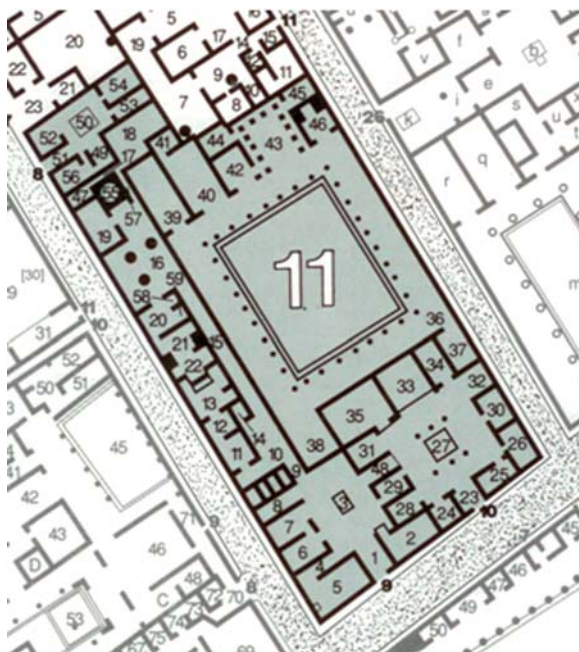


Fig. 1. Casa del Labirinto VI 11, 8-10 (PPM V, 1).

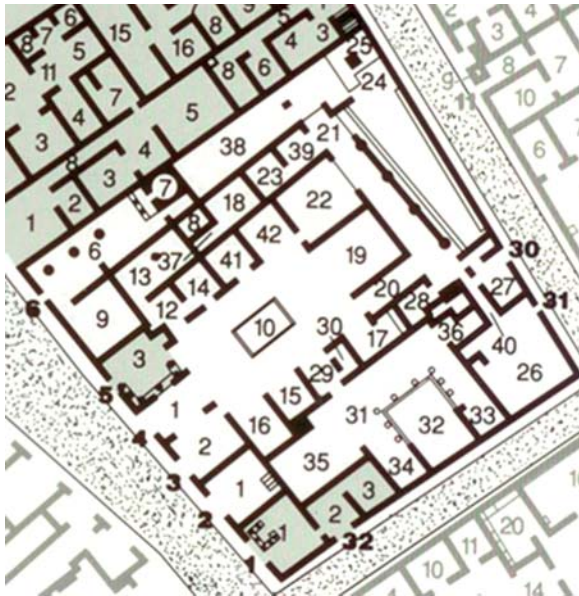


Fig. 2. Casa di Sallustio VI 2, 4 (PPM IV, 87).

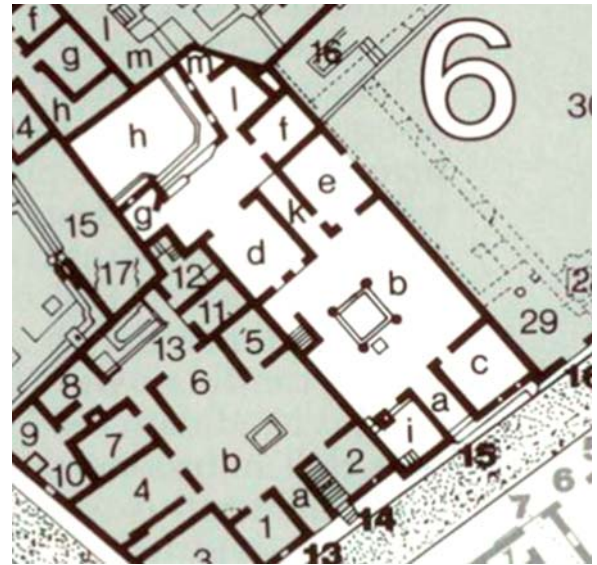


Fig. 4. Casa dei Ceii I 6, 15 (PPM I, 407).

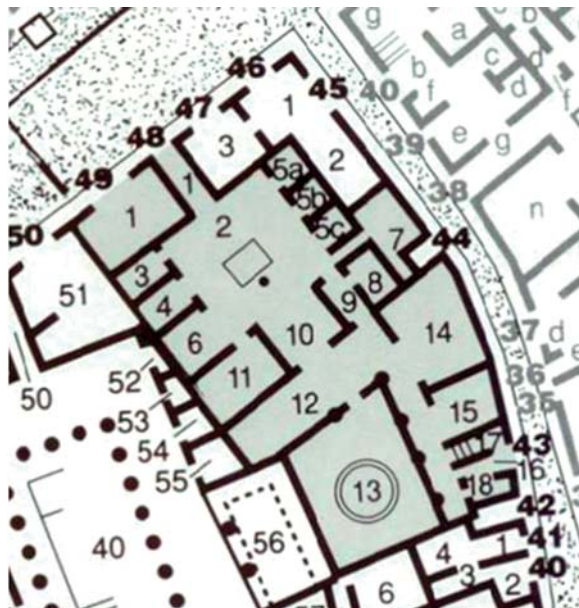


Fig. 3. Casa della Caccia Antica VII 4, 48 (PPM VII, 6).

incorporating marble imitations in wall paintings on the other hand. I discuss eight houses in Pompeii and Herculaneum, for, as with so many topics, the preservation conditions of these towns provide us with excellent and unique data to work with.

The case studies from Pompeii are the Casa del Labirinto (VI 11, 8-10), the Casa di Sallustio (VI 2,

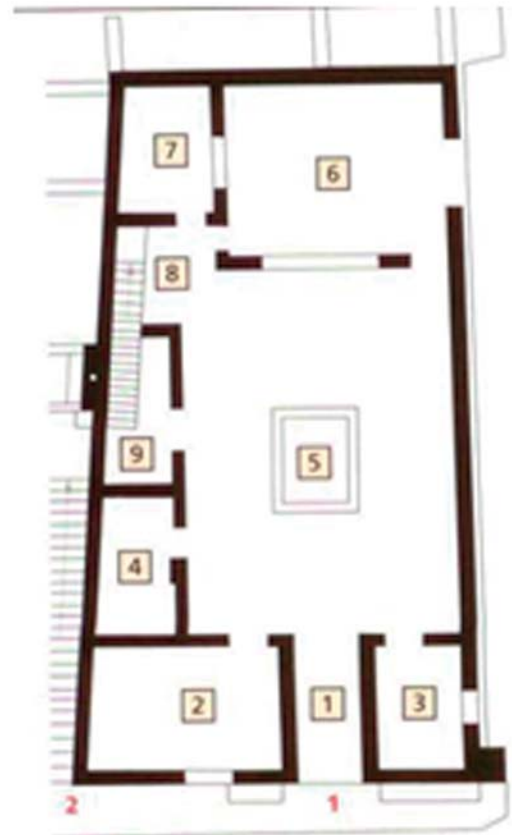


Fig. 5. Casa Sannitica H V 1, 2 (Guidobaldi 2006, 84).



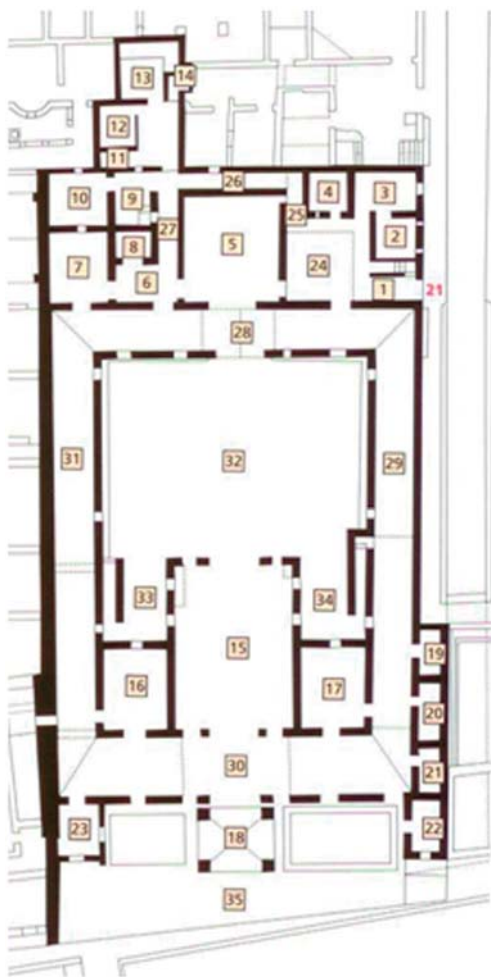


Fig. 6. Casa dei Cervi H IV 21 (Guidobaldi 2006, 77).



Fig. 7. Casa del Rilievo di Telefo H I 2, 3 (Guidobaldi 2006, 43).



Fig. 8. Casa dello Scheletro H III 3 (Guidobaldi 2006, 59).

4), the Casa della Caccia Antica (VII 4, 48) and the Casa dei Ceii (I 6, 15) (figs 1-4).<sup>2</sup> In all four of these houses both marble and marble imitation are incorporated in the decoration program. Furthermore, in my opinion, these houses constitute a cross section of the case studies available for this research, because they differ in size and are located in various parts of the town.<sup>3</sup> The case studies from Herculaneum are the Casa Sannitica (H V 1, 2), the Casa dei Cervi (H IV 21), the Casa del Rilievo di Telefo (H I 2, 3) and the Casa dello Scheletro (H III 3) (figs 5-8).<sup>4</sup> Again, these houses constitute a cross section of the case studies available for this research, because they are of dissimilar dimensions and they are built in different parts of the excavated area.<sup>5</sup> Before I proceed to the discussion of the case studies, I will start this article by introducing the phenomena of marble and marble imitation in Roman antiquity.

#### MARBLE IN ANTIQUITY

Marble is a type of limestone, crystallized by heat and pressure. The Latin word for marble, *marmor*, is a derivative of the Greek μάρμαρος, which means 'crystalline stone' or 'shining stone'. In antiquity, therefore, the term *marmora* did not refer to genuine marbles per se. It constitutes an umbrella term for all solid, crystalline stones that were used for the manufacturing of, among other products, sculptures and architectonic decorations. Next to actual marble, the group determined as *marmora* comprised porphyry, granite, breccia, diorite, basalt, and a few types of finer limestone.<sup>6</sup>

The increasing interest in and availability of marbles caused a natural growth of its use in Roman private contexts from the 1<sup>st</sup> century BC onwards. The prices that needed to be paid for this luxury product varied strongly and were mainly related to the type of marble and its place of origin (i.e. the greater the distance between quarry and buyer and the scarcer the product, the higher its price). Colored marbles were imported from Greece and North-Africa, while white marbles originated either from Greece, the Greek Islands or Italic Luni (table 1). The provenance of colored marbles can be identified quite easily with the naked eye, but only a combination of petrographic, chemical and isotopic analyses can determine the provenance of white marbles from the bigger quarries.<sup>7</sup> It is, however, possible to see the difference between an Italic and a Greek type of white marble, since Greek white marbles have a conspicuous crystalline structure and they therefore 'sparkle', whereas Italic white marble is lusterless. The characteristic Italic type of white marble, *marmor lunense*, was quarried and distributed in enormous quantities. It was often used for construction and relatively cheap, contrary to the more expensive white marbles from Greece and its islands, which were generally used for decorative purposes.

Marble was decoratively utilized in three different ways. The first and possibly most well-known type is sculpture. With decorative marble sculpture, I mean all objects that are made of marble and used to decorate specific spaces, such as statues, garden equipment and reliefs. Most of these were executed in white marble, either Italic or Greek, but once in a while (certain parts of) statues (clothing) or tables (supports) were made of polychrome marble.<sup>8</sup> Since the focus of this article lies on the marble covering of objects, the only decorative marble sculptures that are of relevance here are the rims of *impluvia*.<sup>9</sup>

Next to sculpture, marble was also used to decorate floors. This type of marble use can be subcategorized into three groups, each presenting a specific technique to process marble in floors. The first group comprises the *opera scutulata*, which are mosaic or *opus signinum* floors decorated with geometrically shaped pieces of marble in a regular or irregular pattern.<sup>10</sup> These *opera scutulata* can be found in rooms with a dynamic character, where people did not stay long enough to really look at and admire the floors.<sup>11</sup> The second group includes the *emblemata*, which literally means 'in-laid work' in Latin. The term derives from the Greek ἐμβλημα, which can be translated as 'the

inserted (part)'. Traditionally, an *emblema* refers to a square decoration, mostly made of several pieces of polychrome marbles, which was positioned in the middle of a mosaic floor. *Emblemata* are usually found in static rooms, where people came together.<sup>12</sup> The third group of marble floor decorations encompasses the *sectilia pavimenta*, which are floors in the *opus sectile* technique.<sup>13</sup> Floors decorated in this technique were entirely lined with pieces of polychrome marbles set in various designs. They can only be found in static spaces.<sup>14</sup>

The third and final way to use marble for decorative purposes can be seen on walls. This type of decoration appears less frequent than the floor decorations mentioned above, but the amount is nonetheless sufficient.<sup>15</sup> In houses, marble wall decoration is mainly restricted to the socle, but occasionally a larger part of the wall was lined with marble.<sup>16</sup> Both the quite exceptional marble wall decorations and the more common marble floor decorations introduced here will be discussed in relation to the case studies from Pompeii and Herculaneum. Before I turn to these case studies, however, a brief discussion of the phenomenon of marble imitation is appropriate, in the course of which I will focus mainly on the debate concerning the 'first Pompeian style'.

#### MARBLE IMITATION IN WALL PAINTINGS

In his discourse on Roman wall painting, Vitruvius states that, in the beginning, the Romans imitated the diversity and arrangement of marble inlay.<sup>17</sup> Focusing on the area under discussion here, A. Mau followed Vitruvius' statement when he wrote his famous book on Pompeian wall paintings.<sup>18</sup> In his chronological classification of wall paintings, which is nowadays much discussed, he ranged the marble imitations under the term 'first Pompeian style' (fig. 9).<sup>19</sup>

As most modern authors, I accept and share the current criticism related to the term 'first Pompeian style'. First, the chronology that Mau applied to his style division with regard to the paintings from Pompeii cannot be maintained, since several examples show that the four Pompeian styles were jointly in use in AD 79, which demonstrates that styles that were introduced earlier, like the 'first Pompeian style', were reused in later periods or stayed 'in fashion' during the years. Second, we simply cannot identify this type as specifically Pompeian, or even Campanian or Roman, since paintings in the same style have been found, for example, on Delos and in Olynthos.<sup>20</sup> It therefore represents a more common Mediterranean deco-



Fig. 9. Marble imitation in the 'first style' of painting - the fauces in the Casa Sannitica H V 1, 2 (photo author).



Fig. 10a. Marble imitation in later styles of painting; imitations in the 'second style' - Casa del Labirinto VI 11, 8-10 (photo author).



Fig. 10b. Marble imitation in later styles of painting; imitations in the 'fourth style' - Casa della Caccia Antica VII 4, 48 (photo author).

ration style with variants from different Mediterranean areas.<sup>21</sup> Considering this, I opt for the name 'Italic masonry style' as an alternative to Mau's 'first Pompeian style'. The addition of 'Italic' makes the phrase less broad than the one offered by V.J. Bruno ('masonry style') and this way it covers all the remaining (fragments of) wall

paintings found on the Italic peninsula that are studied under the well-known, but ambiguous term of 'first Pompeian style'. In my view, the 'Italic masonry style' should be seen as a variant of the more common and traditional Mediterranean style.

Some years ago, E.W. Leach voiced another





Fig. 11. Imitations of *giallo antico* in the Casa di Apollo VI 7, 23 (photo author).

much expressed point of discussion with regard to this style of painting. She questioned the fact whether or not it is really marble that has been imitated in the examples at hand.<sup>22</sup> Marble imitation can be defined as the marbling of surfaces, which, with regard to painting, can be translated into the marbling of (certain parts of) walls. In my view, we find both monochrome and polychrome examples of this technique in the eldest Vesuvian paintings. Polychrome examples are easy to detect, since the paintings show clear veins in sectors in which marble is represented.<sup>23</sup> The existence of monochrome marbling is less easy to substantiate, since it does not have any specific features. It should not be forgotten, however, that there are several types of marble that do not have the distinctive veins mentioned before.<sup>24</sup> Some of these vaguely have a form of veining in a linear or dotted pattern, but most of the time this is hardly visible. Therefore, monochrome painted panels can either be accounted for as marble imitation or not. In my opinion, it depends on the final interpretation of the entire decoration whether or not one regards this marble imitation as visible in all wall zones. If we regard the entire decoration of a particular wall as a unit and therefore as an ensemble, we may conclude that, indeed, all wall zones in the earliest Vesuvian wall paintings present marble imitation.

In addition to the debated, and hopefully determined, presence of marble imitation in early Vesuvian painting, the precious stone was imitated in later styles as well (*figs 10a-10b*).<sup>25</sup> Even more so, these later marble imitations are much

more easily recognized as such, since the availability of marble increased, which means that painters had their examples at hand. The 'fourth Pompeian style' puts forth the most elaborate examples of marble imitation in wall decoration. The veining of specific types is accurately executed and the marble is, therefore, very realistically represented and determinable (*figs 11-12*).<sup>26</sup> In contrast to the examples from early paintings, the later imitations are painted on stucco that is not executed in high relief. They are found in the lower or upper regions of the wall, since the 'eye-catchers' of the 'fourth Pompeian style' were the mythological narratives in the middle zone. In my opinion, however, these marble imitations still served as a means to complete the decorative ensemble, but now as costly looking adornments of the elaborately painted mythological scenes.<sup>27</sup>

#### THE CASE OF POMPEII

The Casa del Labirinto, named after a mosaic with a depiction of a labyrinth and Theseus slaying the Minotaur in its centre, measures approximately 2000 m<sup>2</sup> and counts as one of the biggest houses of Pompeii (*fig. 1*).<sup>28</sup> The original house, built in the middle of the 2<sup>nd</sup> century BC, was much smaller, but already at the end of the same century, a *hortus* and two adjoining houses were bought up in order to extend the original dimensions of the house (on the ground floor as well as on the upper floor) and to create a large peristyle.<sup>29</sup> The siege of Pompeii during the Social War caused the house much damage. As a result,



Fig. 12. Imitations of colored marble in the Casa di Octavius Quartio II 2, 2 (photo author).

it needed restoration, which was carried out between ca 70 and 60 BC. At the same time, new rooms were put into use, such as the bath section and some representative rooms to the north of the house.<sup>30</sup> Subsequently, after the earthquake of AD 62, much of the southern part of the house was destroyed. After this second setback, the southern section was partially restored, certain rooms were rebuilt and the upper storey in this part of the house fell out of use. In addition, several rooms to the northwest of the house were put into use as a *panificium*.<sup>31</sup>

The house thus underwent several alterations in various periods. This contributed to the application of a wide range of wall paintings in all possible styles.<sup>32</sup> Marble imitation is a prominent aspect within these wall paintings, which is found in various rooms throughout the house. The Italic masonry style, for instance, is found in rooms 24 (*cubiculum*; static), 27 (*atrium*; dynamic), 33 (*tablinum*; static) and 36 (peristyle; dynamic), all in the eastern - and oldest - section of the house (*table 2*).<sup>33</sup> If V.M. Strocka's treatise on the construction history of the Casa del Labirinto is correct, this part of the house was entirely destroyed by the earthquake of AD 62 and rebuilt from its foundations.<sup>34</sup> This means that the marble imitations in the Italic masonry style were restored in a period in which other styles of paintings were in use for a long time. This marks the value of this type of decoration in the dynamic part of a mansion like the Casa del Labirinto.<sup>35</sup>

Unfortunately, most of the decorations in the Italic masonry style are in a bad state of preservation, especially the middle and lower zones of the walls. The characteristic division of the walls, however, is still visible, as are several traces of

paint.<sup>36</sup> The paint shows that the imitations are executed in red, white, yellow and green and are applied in the *atrium* and in rooms directly adjacent to this central room (i.e. in the most dynamic part of the house). The locations for these early imitations in the Casa del Labirinto recall the places in which the well preserved marble imitations of the Casa di Sallustio are applied. Here, too, all imitations in the Italic masonry style are found in rooms located in or adjacent to the dynamic part of the house (in this case room 10).<sup>37</sup> Moreover, they are all executed in the same colors as the imitations in the Casa del Labirinto: red, white, yellow and green.<sup>38</sup> As has been said before, monochrome marble imitations in the earliest styles of painting are difficult to identify. In analogy with much imitated marbles in later styles, it is likely that the painted panels in the Casa del Labirinto as well as in the Casa di Sallustio were supposed to be imitations of *rosso antico* (red), plain white marble (white), *giallo antico* (yellow) and *cipollino verde* (green).

Besides the marble imitations in the Italic masonry style, several other types of marble imitation are found in the Casa del Labirinto. Most of them constitute imitations in the 'second style', which are found in rooms that were equipped or redecorated in a period in which this particular style of wall painting was in fashion (70-60 BC). Rooms 3, 4, 5, 41 and 44 present a simple design in the 'second style', whereas rooms 7, 39, 42, 43, 45 and 46 contain more elaborate paintings, which is reflected in the marble imitations added to the respective paintings. Next to monochrome marble imitations, imitations of alabaster and *giallo antico* can be identified. Subsequently, unidentifiable imitations are applied that can be recognized as

nonexistent fantasy marbles or, more likely, as unrecognizable imitations. Most of the rooms in which these later imitations were applied have a static character and were meant to impress visitors, which is especially the case with regard to the rooms that are located to the north of the peristyle (39, 42, 43, 46). Those were the rooms in which the house owner presumably received his intimate, socially equal guests whom he wanted to impress with luxurious decorations. The marble imitations serve in that respect as luxurious adornments of the decorative ensemble that give the entire wall a more expensive sight.

Next to the marble imitations in the Italic masonry style and the 'second style', one example can be found in the Casa del Labirinto of marble imitation in the 'fourth style'. It concerns the dado zone of room 6, where the marble imitation visible in the northwest corner shows a pattern which is also found in rooms 10 and 15 of the Casa della Caccia Antica. The painting shows the pattern typical for marble imitation in the 'fourth style': circles, squares and lozenges, painted in the middle of square and rectangular fields. The colors of the imitations in the Casa del Labirinto are not as well preserved as those in the Casa della Caccia Antica, but yellow, red and deep red imitations are discernible.<sup>39</sup> As we have seen before, these colors could point to imitations of *giallo antico* (yellow) and *rosso antico* (red).<sup>40</sup>

In sum, the marble imitations in the Casa del Labirinto range from simplistic and hardly determinable ones in the Italic masonry style to more elaborately painted and easier recognizable imitations in later styles of painting. As we have seen, the imitations in the Italic masonry style are mainly applied in or directly adjacent to the dynamic part of the house, while the later imitations are found in rooms in the more static parts of the house, mainly in the rooms north of the peristyle. This tendency is also found in the other Pompeian houses used for this study (table 2).<sup>41</sup>

It is remarkable that the use of real marble with regard to the marble covering of objects and wall and floor decoration seems scarce in a house as large as the Casa del Labirinto. The only two examples can be found in rooms 27 and 43. In room 27, a dynamic room (*atrium*), the cistern is provided with a rim of Italic white marble. In room 43, a room with a static character (Corinthian *oecus*), the floor is decorated with an *emblema* with various types of colored marble (*portasanta*, *pavonazzetto*, *giallo antico* and *cipollino*).<sup>42</sup> Even though the use of real marble is limited, the examples from the Casa del Labirinto reflect the general

trend in decorations of real marble in Pompeii. Italic white marble is mainly used in rooms with a dynamic character, while colored marble is used in static rooms (table 2).

If we combine the data retrieved from the Pompeian case studies that represent the application of marble imitation as well as the use of real marble, it becomes clear that imitations in the Italic masonry style are often combined with the use of Italic white marble (floors) in dynamic rooms such as the *atrium* of a house. More realistic imitations from later styles are found in static rooms, such as an *oecus* or *triclinium*, where they are combined with decorations of real colored marbles (table 2).<sup>43</sup> The explanation of this phenomenon can be found in the function of the respective rooms. Dynamic rooms were used by the house owner (*patronus*) to receive his *clientes*. The Italic masonry style and the simple Italic white marbles were status symbols. They represented the highly valued and modest aristocratic traditions, which reflected the owner's wealth, power and prestige and was opposite from the lower status of his *clientes*. The marble imitations in later styles and real colored marbles are found in the static rooms of the house where the house owner received guests and family of (more or less) equal standing. The decorations in these rooms were not used to show status, since visitors of these rooms were of the same social rank, but to 'simply' emulate the decorative systems found in the houses of the guests present. It shows moreover that the house owner spent much money to decorate these rooms and that he followed current trends of fashion. He maintained or (re)gained respect among his equals, which served him well in for instance his business or political career.

#### THE CASE OF HERCULANEUM

The difference between the cities of Pompeii and Herculaneum with regard to the phenomenon of marble imitation is apparent: whereas the houses of Pompeii enclose several examples in all styles of painting, the only obvious example of marble imitation in Herculaneum is found in the *fauces* of the Casa Sannitica (H V 1, 2).<sup>44</sup> Conversely, the relatively small area of Herculaneum that has been excavated did not prevent the excavators from discovering much marble in almost every house, large or small, whereas marble in Pompeii is much less apparent in domestic decoration.<sup>45</sup> First, I will discuss the marble imitation in the Casa Sannitica. Subsequently, the floor and wall decorations, executed in real marble, of the other three Hercula-



nean case studies will be examined (table 3).<sup>46</sup>

The Casa Sannitica, named after an Oscan inscription found in the *fauces*, was presumably built at the end of the 3<sup>rd</sup> century BC. Originally, the house was much larger than its final 190 m<sup>2</sup>. In the first half of the 2<sup>nd</sup> century BC, the peristyle and garden of the Casa Sannitica were sold and became part of the adjoining Casa del Gran Portale.<sup>47</sup> Shortly afterwards, the loggia in the upper zone of the *atrium* was constructed to give the house a spacious and more prestigious view. After the earthquake of AD 62, however, part of this loggia was walled up, so as to create a solid foundation for the upper storey of the house. At approximately the same time, a new *impluvium* was placed in the *atrium* and all walls were redecorated. J. Clarke states that ‘.. all of the First-Style decoration save that of the *fauces* was repainted in the Fourth Style’.<sup>48</sup> This remark is interesting, since we have seen that decorations in the Italic masonry style (Clarke’s ‘First Style’) in Pompeii were restored after they were damaged. If Clarke is right, then the process of repainting does not only represent one of the differences between Pompeii and Herculaneum concerning the Italic masonry style, but it might also be a possible explanation of why there are hardly any examples of this early style of painting left in Herculaneum.

However, in the upper zones of both *fauces* walls, above the dentil cornice that terminates the decoration in the Italic masonry style of the middle and lower zones, two landscape paintings can be found. In his discussion of these particular paintings, E.M. Moormann has argued - against the *communis opinio* - that the Italic masonry style and the landscape paintings in the *fauces* should be regarded as a unitary decoration that was applied after the earthquake of AD 62.<sup>49</sup> If Moormann’s interpretation is right, then the entire house including the *fauces* was repainted in the period of the fourth style.<sup>50</sup>

It is difficult to determine which one of the proposed interpretations is closest to what actually happened with regard to the decoration of the Casa Sannitica. Nevertheless, I stated earlier on that I am of the opinion that the decoration of a wall should be regarded as a unit, which is actually what Moormann contends, too.<sup>51</sup> So, in order to try to find a valid solution for the dispute presented above, we should first turn to the decoration in the Italic masonry style in more detail.

The marble imitations applied in the *fauces* of the Casa Sannitica occupy a location that corresponds to examples in this style from Pompeii.<sup>52</sup> The imitations are executed in monochrome and

polychrome patterns. Again, it is difficult to identify the monochrome marbles. The yellow panels may be imitations of *giallo antico*, the white of plain white marble (Greek or Italic) and the red of *rosso antico*. The polychrome panel on the south wall of the *fauces* shows an imitation in deep red / purple, yellow, green and white. An imitation similar in shape and colors is used to decorate the frame around one of the painted panels in room 42 of the Casa di Sallustio in Pompeii. It is possible that both paintings are imitations of *breccia verde d’Egitto*. The deep red panels have been identified by A. Maiuri and, following him, Clarke as porphyry, but, as has been said before, the porphyry quarries were yet to be discovered when the Italic masonry style was introduced.<sup>53</sup> So, if the decoration is original to the house, the deep red color should be regarded as an imitation of an unidentifiable type of marble (perhaps *rosso antico*). Returning to the dispute about the dating of these paintings in combination with the landscape paintings in the upper zones of the walls, however, it may be that the *fauces* decorations in the Italic masonry style belong to the entire redecoration of the Casa Sannitica after the earthquake of AD 62. At that moment in time, the porphyry quarries were in use and, as a result, the interpretation of Maiuri and Clarke (i.e. that the panels in deep red were imitations of *porfido rosso*) is correct. This conclusion also implies that Moormann’s interpretation of the wall decorations in the *fauces* of this house is the right one.

The use of real marble in Herculaneum is abundant. In all houses examined for this study in Herculaneum, Italic white marble is found in the way it was used in all Pompeian houses that have been discussed. In the Casa Sannitica and the Casa del Rilievo di Telefo, the respective *atria* are decorated with an *impluvium* of white marble. The *atrium* of the latter house is also provided with a white marble puteal. The water basin in room 15-16 of the Casa dello Scheletro, identified as a *nymphaeum*, was covered with white marble as well.<sup>54</sup> So, the use of real marble in Herculaneum appears to correspond with the phenomenon detected at Pompeii: Italic white marble is used in decorations that are mainly found in rooms in the dynamic part of a house, or, as we have seen in the case of the summer *triclinium* in room 25 of the Casa di Sallustio, where it is expected.

The use of colored marbles in Herculaneum, however, does not correspond at all to the practice observed in the houses of Pompeii. The Casa dei Cervi, the Casa del Rilievo di Telefo and the Casa dello Scheletro all display plenty of colored



Fig. 13. Opus scutulatum pattern in the fauces (room 1) of the Casa dei Cervi H IV 21 (photo author).

marbles that were used to decorate the floors and, sometimes, the walls of several rooms in the dynamic as well as the static parts of the respective dwellings. Floors in *opus scutulatum* are found in the Casa dei Cervi (rooms 1 and A, B, C, D) and the Casa dello Scheletro (room 1). The *fauces* of the latter house are decorated with a floor of black *tesserae*, which is framed with a double row of white *tesserae*. In the middle of the decoration, triangles of Italic white marble are placed in a straight pattern of three rows. The *opus scutulatum* patterns in the Casa dei Cervi show a similar design; only now the main part of the mosaic is made of white *tesserae*, framed with a double row of black *tesserae*. The inlaid marble pieces differ in shape (triangles, lozenges, squares and rectangles), but are again organized in long, straight rows. Attention is paid to the arrangement of colors as well. Similar colors are placed together as much as possible, which causes an austere design (fig. 13). The marbles can be easily identified as, amongst others, *giallo antico*, *cipollino*, *rosso antico*, *nero antico* and Italic or Greek white marble.

*Sectilia pavimenta* are abundantly found in all three houses. The Casa dello Scheletro and the Casa del Rilievo di Telefo both have four rooms in which this particular type of decoration is exe-

cuted, while the Casa dei Cervi even has nine. Different patterns and types of marble are found in the respective houses. The rooms of the Casa dei Cervi that were decorated with a *pavimentum sectile* were all located near the portico (A, B, C, D) and the *viridarium* (room 32), except for room 10.<sup>58</sup> The marbles used in these decorations are, amongst others, *giallo antico*, *rosso antico*, alabaster, *cipollino*, *africano* and Italic white marble. Surprisingly, no traces have been found of either the luxurious and expensive Egyptian red and green porphyry or the Greek *porfido serpentino*. Since the rest of the decorative system of the Casa dei Cervi shows the substantial wealth of its owner, it seems plausible that the marble floors were decorated before the porphyry quarries were discovered or before they produced marble on a large scale for the Italic peninsula. This implies that the floor decorations of the Casa dei Cervi can be dated to the 1<sup>st</sup> century BC.<sup>55</sup> It is, however, also possible that the floors were decorated at a later date and that the owner wanted to use marbles that were available quickly and in large quantities, which at the time did not count for porphyry.

Rooms 10 and 12 of the Casa del Rilievo di Telefo are decorated in a similar manner and with the same types of marble as rooms 5 and 15 of the





Fig. 14. Marble wall decoration in room 15 of the Casa dei Cervi H IV 21 (photo author).



Fig. 15. Marble wall decoration in room 17 of the Casa dei Cervi H IV 21 (photo author).

Casa dei Cervi. Conversely, in room 24, the lower *oculus*, only *fior di pesco*, *cipollino* and *pavonazzetto* were used. The last and most conspicuous example of a *pavimentum sectile* in the Casa del Rilievo di Telefo is found in room 18, where geometrically shaped pieces of *fior di pesco*, *cipollino*, *pavonazzetto*, *breccia*, *porfido serpentino*, alabaster, *nero antico* and white marbles decorate the floor.

The Casa dello Scheletro - with respect to its size a much more modest house than the previously discussed houses - has four rooms of which the floors are decorated with *sectilia pavimenta*. Rooms 7 and 12 present a more or less similar

design: rectangles of *nero antico* are framed with narrow pieces of white marble and the ensemble is embellished with squares of *rosso antico*.<sup>56</sup> Room 10 shows a pattern of black lozenges in white squares, both of limestone, alternated with squares of *giallo antico* and *rosso antico*. The alcove in room 8 is decorated in a similar manner as in room 12. The centre of this room is decorated in the same pattern of squares and lozenges visible in room 10, but in this case the marbles used are, amongst others, *giallo antico*, *nero antico*, *rosso antico* and several types of *breccia*.

Finally, the Casa dei Cervi and the Casa del



Fig. 16. Marble wall decoration in room 18 of the Casa del Rilievo di Telefo H I 2, 3 (photo author).



Rilievo di Telefo both have rooms in which marble is used to decorate walls. Room 15 of the Casa dei Cervi has a socle made of a low dado of *cipollino verde*, above which rectangular standing slabs of white marble are placed in a row without dividing strips (fig. 14). Room 17 fills a mirrored location with room 16 in the plan of this house: both are situated at the end of the *viridarium* and had a sea view. The walls of room 17 show the remnants of a luxurious marble decoration, consisting of broad strips of *cipollino verde* that framed large rectangles, which are now lost, of an unknown material, most likely another type of marble (fig. 15).<sup>58</sup> Room 24 of the Casa del Rilievo di Telefo has a socle that consists of a low dado of grey marble, above which large oblong rectangular panels of *pavonazzetto* framed with small strips of *giallo antico* are placed. A strip of *giallo antico* tops the marble socle. Room 18 of the same house, previously mentioned in relation to its splendid floor decoration, houses the best preserved and most luxurious design of marble wall decoration. In this room, the lower half of all walls is decorated with a low dado of *breccia*, above which a higher plinth of either *cipollino verde* or *giallo antico* is placed. Above these, large rectangles of *giallo antico*, *cipollino verde* and *pavonazzetto* are situated, framed by strips of *pavonazzetto* and *giallo antico*. Between these framed panels, columns of *cipollino verde* with a Corinthian capital of white marble are situated, which rest on top of the lowest dado of *breccia* (fig. 16).

In contrast to Pompeii, it evinces that the owners of the houses in Herculaneum discussed here specifically used real marble instead of marble imitation as a status symbol and as a means to display their wealth. Many costly *sectilia pavimenta* made of colored marbles are found throughout the houses, but mainly in static rooms such as *triclinia* and *oeci*, just as the marble wall decorations discovered here. Decorations in which colored marble is used on a less extensive scale, such as floors in *opus scutulatum*, are more frequently found in dynamic rooms, such as the *fauces*.

#### CONCLUDING REMARKS

The cases discussed here clearly show a difference in the application of marble imitation and the use of real marble in the cities of Pompeii and Herculaneum. First of all, the houses in Pompeii did not contain many decorations made of real marble, which is the exact opposite of what we see in Herculaneum. In addition, marble imitation was fairly popular in Pompeii in all styles of painting,

while the ruins of Herculaneum only present two walls with an early type of imitation.<sup>59</sup>

If we examine the selected houses at Pompeii more thoroughly, choices concerning the kind of decoration applied in a particular room seem to have been made consciously. Italic white marble and marble imitation in the Italic masonry style were frequently applied in dynamic rooms where *clientes* were received. Both types of decoration show power and wealth, but reflected at the same time the modest way of life of the aristocrats of the Republic, with which the *patronus* of the house seemed to send out the message. Polychrome marbles and more realistic and elaborate imitations in later styles of painting are usually found in static rooms, in which guests of equal social standing were entertained. The house owner impressed his guests with these decorations, not only because they were costly and, at times, difficult to obtain, but possibly also because it showed his interest in current fashion trends.

An entirely different phenomenon is detected in Herculaneum. A shift in focus from wall decoration to floor decoration seems to occur at the end of the 1<sup>st</sup> century BC. From this moment on, wealth, status and power were mainly presented by luxurious and expensive floor decorations of colored marble. A small distinction may be seen in the design and type of marble decoration found in dynamic rooms where *clientes* came (floor decoration in *opus scutulatum*) and those in static rooms where the house owner received his more intimate guests (floor decoration in *opus sectile*). If we might deduce any conclusion from the few case studies presented here, it appears that, with regard to houses in which marble was used and/or marble imitation was applied, Pompeii stuck to the dignified values of the Republic, while Herculaneum showed a more progressive attitude towards the new fashion trends.

Table 1. Main types of marble that were used and/or imitated in the Vesuvian area.<sup>60</sup>

Type	Main colors	Provenance	Introduction in Rome
<i>marmor numidicum</i> (giallo antico)	yellow, red veins	Simithus (North-Africa)	Scarce in 2 <sup>nd</sup> c. BC; used on a larger scale from 78 BC onwards
<i>marmor taenareum</i> (rosso antico)	red	Taenaros (Greece)	1 <sup>st</sup> half of the 1 <sup>st</sup> c. BC
<i>marmor luculleum</i> (africano)	red / yellow; black veins	Teos (Asia Minor)	From 74 BC onwards
<i>marmor carystium</i> (cipollino)	white / green	Karystos (Greece)	Middle of the 1 <sup>st</sup> c. BC
<i>marmor lunense</i>	white	Luni (Italic peninsula)	Middle of the 1 <sup>st</sup> c. BC
<i>lapis lacedaemonius</i> (porfido serpentino)	green	Sparta (Greece)	End of the 1 <sup>st</sup> c. BC
<i>marmor chium</i> (portasanta)	red / salmon	Chios (Greece)	End of the 1 <sup>st</sup> c. BC
<i>marmor docimenum</i> (pavonazzetto)	white / purple	Docimium (Asia Minor)	End of the 1 <sup>st</sup> c. BC
<i>alabastrites</i> (alabaster)	multicolored; circular veins	Egypt (North-Africa)	End of the 1 <sup>st</sup> c. BC
<i>marmor parium</i>	white	Paros (Greece)	1 <sup>st</sup> c. BC
<i>marmor pentelicum</i>	white	Athens (Greece)	1 <sup>st</sup> c. BC
<i>breccia corallina</i>	red / white	Vezirhan (Asia Minor)	Late-Augustan
<i>porfido verde</i> (oliva)	green	Gebel Dokhan (North-Africa)	1 <sup>st</sup> c. AD
<i>porfido rosso</i> (porphyrites)	purple / red	Gebel Dokhan (North-Africa)	Used only sporadically until AD 98
<i>marmor proconnesium</i>	white	Proconnesos (Asia Minor)	Unknown, but from AD 117 onwards used on a large scale
<i>marmor thasium</i>	white variant	Thasos (Greece)	Unknown

Table 2. The use of marble and the application of marble imitation in four case studies from Pompeii.

House	Room	Room type	Marble (floor/wall)	Marble imitation (wall)
Casa del Labirinto (VI 11, 8-10)	3	Static		'Second Style'
	4	Static		'Second Style'
	5	Static		'Second Style'
	6	Static		'Fourth Style'
	7	Static		'Second Style'
	24	Dynamic		Italic Masonry Style
	27	Dynamic	Cistern rim	Italic Masonry Style
	33	Static		Italic Masonry Style
	36	Dynamic		Italic Masonry Style
	3	Static		'Second Style'
	41	Static		'Second Style'
	42	Static		'Second Style'
	43	Static	<i>Emblema</i>	'Second Style'
	44	Static		'Second Style'
	45	Static		'Second Style'
	46	Static		'Second Style'
Casa di Sallustio (VI 2, 4)	10	Dynamic		Italic Masonry Style
	15	Dynamic		Italic Masonry Style
	17	Dynamic		Italic Masonry Style
	19	Static	White mortar with small pieces of marble	Italic Masonry Style
	20	Dynamic		Italic Masonry Style
	22	Dynamic	White mortar with small pieces of marble	Italic Masonry Style
	25	Static	<i>Triclinium</i> furniture	
	28	Dynamic/Static	Italic Masonry Style	
	34	Static	<i>Opus sectile</i> Wall	'Fourth Style'
Casa della Caccia Antica (VII 4, 48)	42	Dynamic		Italic Masonry Style
	4	Static	White mortar with chips of marble	
	6	Dynamic	White mortar with chips of marble	
	10	Static		'Fourth Style'
	15	Static	White mortar with pieces of marble	'Fourth Style'
Casa dei Ceii (I 6, 15)	façade	(Dynamic)		Italic Masonry Style
	b	Dynamic	<i>Impluvium</i> ; Italic white	
	e	Static	<i>Emblema</i> ; colored	



Table 3. The use of marble and the application of marble imitation in four case studies from Herculaneum.

House	Room nr	Room type	Marble	Marble imitation
Casa dei Cervi (H IV 21)	1	Dynamic	<i>Opus scutulatum</i>	
	A	Dynamic	<i>Opus scutulatum</i>	
	B	Dynamic	<i>Opus scutulatum</i>	
	C	Dynamic	<i>Opus scutulatum</i>	
	D	Dynamic	<i>Opus scutulatum</i>	
	5	Static	<i>Opus sectile</i>	
	6	Static (?)	<i>Opus sectile</i>	
	7	Static	<i>Opus sectile</i>	
	10	Static	<i>Opus sectile</i>	
	15	Static	<i>Opus sectile</i>	
			Wall	
	16	Static	<i>Opus sectile</i>	
	17	Static	<i>Opus sectile</i>	
			Wall	
Casa del Rilievo di Telefo (H I 2, 3)	18	Static	<i>Opus sectile</i>	
	23	Static	<i>Opus sectile</i>	
	2	Dynamic	<i>Impluvium</i>	
	10	Static	<i>Opus sectile</i>	
	12	Static	<i>Opus sectile</i>	
Casa dello Scheletro (H III 3)	18	Static	<i>Opus sectile</i>	
	24	Static	<i>Opus sectile</i>	
	1	Dynamic	<i>Opus scutulatum</i>	
	7	Static	<i>Opus sectile</i>	
	8	Static	<i>Opus sectile</i>	
	10	Static	<i>Opus sectile</i>	
	12	Static	<i>Opus sectile</i>	
Casa Sannitica (H V 1, 2)	15	Static	Water basin	
	16	Static	Water basin	
	1	Dynamic		Italic Masonry Style
	5	Dynamic	<i>Impluvium</i>	

## NOTES

- \* This article is mainly based on my Master's thesis, entitled 'Marmora Splendida. Marmer en marmerimitatie in Pompeii en Herculaneum'. I am greatly indebted to Dr. Stephan T.A.M. Mols, who supervised my thesis and discussed several aspects of the subject proper in great length with me.
- <sup>1</sup> See for example Plin., *Nat. hist.* 36.109; Cic., *In Cat.* 2.5.11; Tac. *Ann.*, 3.55.
  - <sup>2</sup> The house and room numbers mentioned in relation to these case studies correspond to those cited on the plans published in *PPM*: (VI 11, 8-10) *PPM* V 1; (VI 2, 4) *PPM* IV 87; (VII 4, 48) *PPM* VII 6; (I 6, 15) *PPM* I 407.
  - <sup>3</sup> Since it is not possible here to discuss all Pompeian houses in detail, I will elaborate on the Casa del Labirinto and present the results of the other case studies schematically, in order to use them as references and for comparison. For the Casa del Labirinto, see *PPM* V 1-70 and Strocka 1991.
  - <sup>4</sup> I added the 'H' of Herculaneum to these house numbers in order to distinguish between the houses from both cities. The house and room numbers concerning the case studies from Herculaneum are taken from the respective plans published in Guidobaldi 2006: (H V 1,2) 84; (H IV 21) 77; (H I 2,3) 43; (H III 3) 59. For these plans, see figs 5-8.
  - <sup>5</sup> For the sake of brevity, the Casa dei Cervi, the Casa del Rilievo di Telefo and the Casa dello Scheletro are discussed together. The Casa Sannitica is examined separately, since this house presents a decorative design that differs from that of the other three.
  - <sup>6</sup> Dodge/Ward-Perkins 1992, 13, 15.
  - <sup>7</sup> Moens/ Roos et al. 1988, 249; see also Jongste 1995, 59.
  - <sup>8</sup> An overview of colored marbles from Rome can be found in Gnoli 1971 and De Nuccio/Ungaro 2002.
  - <sup>9</sup> Marble statues and furniture are thus largely excluded, as are representations of these objects in wall paintings. See Dickmann (1999) 301-312 for the use of marble in *atria*.
  - <sup>10</sup> Guidobaldi/Salvatori 1988, 171; see also Morricone 1980, 9, who defines floors in the *opus scutulatum* technique as 'pavimenti [...] quali mostrano inserite o nel battuto del fondo (se si tratta di signini, rossi o bianchi) o fra le tessere (se si tratta di mosaici) scaglie di pietra o di marmo [...]'. In this case, I consider only the floors in which 'scaglie di marmo' are involved.
  - <sup>11</sup> For a definition of 'dynamic spaces', see e.g. Clarke 1991, 16. See for example room 1 in the Casa dei Cervi (H IV 21).
  - <sup>12</sup> For a definition of 'static spaces', see e.g. Clarke 1991, 16. See for instance room e in the Casa dei Ceii (I 6, 15); see *PPM* VII 441 and Michel 1990, 37 and fig. 198.
  - <sup>13</sup> For an in depth case study of *sectilia pavimenta*, see F. Guidobaldi (ed.) 1994, *Sectilia Pavimenta di Villa Adriana*, Rome.
  - <sup>14</sup> See for instance room 10 in the Casa dello Scheletro (H III 3).
  - <sup>15</sup> See Meyboom/Moormann 2012, chapter 6.
  - <sup>16</sup> An example can still be seen in room 18 of the Casa del Rilievo di Telefo (H I 2-3).
  - <sup>17</sup> Vit. *De arch.* 7.5.1: [A]ntiqui, qui initia expolitionibus instituerunt, imitati sunt primum crustarum marmorearum varietates et conlocationes, deinde coronarum, siliculorum, cuneorum inter se varias distributiones.
  - <sup>18</sup> Mau 1882.
  - <sup>19</sup> For an illustration of this early type of marble imitation, see fig. 9. For criticism on Mau's chronological division and attempts to rename the 'first Pompeian style', see Bruno 1969; see also Laidlaw 1985; Leach 2004; Mols 2005.
  - <sup>20</sup> Bruno 1969, 309, 311; see also Barbet 1985, 23. Common factor in both the Pompeian and Greek paintings is the characteristic division of the wall in several horizontal sectors, or zones. The differences between these variants can be found in the height of the socle, the presence or absence of a supporting function for the orthostates, and the colors that were used.
  - <sup>21</sup> Cf. Mols 2005, 245.
  - <sup>22</sup> Leach 2004, 59.
  - <sup>23</sup> See for instance the imitation of alabaster in the Casa del Fauno (VI 12, 2; *PPM* V figs 10a-b).
  - <sup>24</sup> Examples are *rosso antico*, the porphyries (with the exception of *porfido serpentino*) and the white marbles.
  - <sup>25</sup> For illustrations of marble imitation in later styles of painting, see fig. 10. For an overview of many of the marble imitations found in Pompeii, see Eristov 1979.
  - <sup>26</sup> See for instance the garden *cubiculum* in the Casa di Apollo (VI 7, 23; *giallo antico*, see fig. 11) and the *triclinium* in the Casa di Octavius Quartio (II 2, 2; amongst others *pavonazzetto*, *giallo antico* and *africano*, see fig. 12).
  - <sup>27</sup> Some scholars range paintings with a so-called zebra pattern amongst marble imitations. The reading of these paintings is complex and controversial, for which reason I chose to eliminate them from this paper. I will return to them in future research. See for different interpretations on these paintings, Laken 2000 and Goulet 2000; cf. Jansen 1993 and Leach 1993.
  - <sup>28</sup> See fig. 1 for a plan of the Casa del Labirinto. For the naming of the rooms, I follow Strocka 1991 and *PPM* V. The mosaic of Theseus can be found in room 42 (see *PPM* V 37-38 and Strocka 1991, 43, 105, 107, 120 and figs 269-273).
  - <sup>29</sup> Strocka 1991, 66-68; see also Pesando/Guidobaldi 2006, 189.
  - <sup>30</sup> *PPM* V 2; see also Strocka 1991, 68; Pesando/Guidobaldi 2006, 189. The new rooms were 20-22 (bath section) and 42, 43, 46 (representative rooms).
  - <sup>31</sup> Strocka 1991, 70. The *panificium* was installed in rooms 16, 19, 20.
  - <sup>32</sup> For a thorough description of the wall paintings in the Casa del Labirinto, see Strocka 1991, 107-120, 127-131 ('second and fourth styles'); see also Hanoune/De Vos 1985, 871-878 ('third style'); Laidlaw 1985, 165-170 ('first style').
  - <sup>33</sup> See table 2 for an overview of all the rooms in the houses examined in Pompeii in which marble and/or marble imitation can be found. *PPM* V 48 detects an example of the Italic masonry style on the north wall of room 14 as well. The remains of this wall decoration, however, do not recall a decoration in the Italic masonry style. The characteristic division of the wall into socle, orthostates and upper zone is not visible. The only indication that could refer to the early style of painting is the protruding cornice, but after analogy with other paintings in the Italic masonry style this should have been a dentil cornice, not a smooth one such as is applied in this case. Furthermore, the cornice protrudes directly below the spring of the alcove, which is a phenomenon that occurs frequently in later styles of wall painting. In my opinion, therefore, the north wall of room 14 does not hold a decoration in the Italic masonry style. For parallels, see for instance room I of the

- Casa degli Amorini Dorati (VI 16, 7.38; *PPM* V 792 and Seiler 1992, fig. 325) ('fourth style'), room m of the Casa del Principe di Napoli (VI 15, 7.8; *PPM* V 668 and Strocka 1984, fig. 158) ('fourth style') and room 21 of the Casa del Labirinto (VI 11, 8-10; Strocka 1991, figs 391-392) ('third style').
- <sup>34</sup> Strocka 1991, 70. Cf. *PPM* V 2.
- <sup>35</sup> Compare Mols 2005 on similarly restored paintings in other houses in Pompeii.
- <sup>36</sup> Traces of paint can be found especially in room 24 and in the *atrium* (27).
- <sup>37</sup> The Italic masonry style applied to the façade of the Casa dei Ceii (I 6, 15) can also be regarded as an example of this type of decoration in a 'dynamic' area.
- <sup>38</sup> In some rooms of the Casa di Sallustio, also imitations in deep red are present (such as in room 10; *PPM* IV 96), which are not found (anymore) in the Italic masonry style applied in the Casa del Labirinto. This color does occur, however, in the marble imitations in later styles of painting in the Casa del Labirinto (see for instance the imitations in rooms 45 and 46; *PPM* V 46-55 and Strocka 1991, figs 325-326, 329, 335-336, 354-358).
- <sup>39</sup> In the Casa della Caccia Antica, realistic imitations of *giallo antico*, red porphyry, *porfido serpentino* and *cipollino verde* are visible. See *PPM* VII 22, 24-25, 28, 36, 38, 40 and Allison/Sear 2002, 26-27, 30, 48-50, 82, 86 and figs 57-58, 99-100, 103-106, 117-124, 217-218, 220, 223-224, 226, 228, 230, 232-233.
- <sup>40</sup> The porphyry quarries at Gebel Dokhan were yet to be discovered when the Italic masonry style was first applied. Therefore, the deep red color in the Casa del Labirinto examples cannot be regarded as imitation of *porfido rosso*. Cf. Fant 2007, 336.
- <sup>41</sup> See table 2. There are a few exceptions to this rule. Rooms 3-7 of the Casa del Labirinto house imitations in later styles (see *PPM* V 9-13 and Strocka 1991, 20-25 and figs 106, 109, 112-115, 118). This is, however, exactly the part of the house where the 'care taker' of the house lived, cf. Strocka 1991, 134-136. Thus, this part was not necessarily 'dynamic', since the care taker would not receive *clientes* (see below). It would just be part of his personal and private domain, since he did not have many rooms at his disposal. Another exception is found in room 25 of the Casa di Sallustio, where white marble is used in the decoration of a summer *triclinium* (see *PPM* IV 122). It concerns garden equipment, though, which is almost always executed in white marble. So, the only exceptions are rooms 6 and 10 in the Casa della Caccia Antica. Both rooms are located in or directly adjacent to the dynamic part of the house. In contradiction to the rule presented here, room 6 has a decoration in which real colored marbles are processed and room 10 houses very realistic marble imitations in the 'fourth style' (see *PPM* VII 16-29 and Allison/Sear 2002, 25-30, 32-35, 82, 86 and figs 99-100, 103-106, 117-124). These exceptions may reflect hitherto undetected changing tendencies with regard to the use of real marble and the application of marble imitation in certain rooms within particular houses. To test this hypothesis, a study based on more case studies is required. Therefore, it cannot be discussed here.
- <sup>42</sup> A similar decoration in a comparable (static) room can be found in room e of the Casa dei Ceii (I 6, 15); see *PPM* VII 441 and Michel 1990, 37 and fig. 198.
- <sup>43</sup> For a schematic overview of these room types and their respective decorations regarding these suggestions, see table 2.
- <sup>44</sup> The wall paintings in Herculaneum are in general less well preserved than those in Pompeii. In my opinion, however, this does not mean that there might have been many more decorations in the Italic masonry style that are now lost to us, since the characteristic tripartite wall division, executed in high relief, cannot be traced in the preserved stucco. Subsequently, marble imitation in later styles are equally rare in Herculaneum. The Villa dei Papiri, which contains marble imitations in the 'second style' and the 'fourth style', seems to be the only example where this phenomenon is attested (cf. Moormann 2009, 154, 160). However, these imitations are left out from this study, since the Villa dei Papiri is a *villa* outside the city, whereas the cases from this study are all *domus* within the city. (I hope to pursue the subject of marble imitations in villas in a future article.)
- <sup>45</sup> Supposedly, only a quarter of the town is known to us (cf. Pagano 1996, 229-238, pl. 1; see also De Kind 1998, pl. 2). In my opinion, however, it is justified to assume that this quarter is representative of what the character of the entire town might have been like. Therefore, I consider it valid to compare the small area of Herculaneum with the town of Pompeii.
- <sup>46</sup> See table 3 for an overview of all the rooms examined in Herculaneum in which marble and/or marble imitation can be found. The marble floor decorations in Herculaneum are exquisite, both in design and in the choice of marbles used. They therefore deserve more attention than could be provided in this article.
- <sup>47</sup> Clarke 1991, 85.
- <sup>48</sup> Clarke 1991, 87. See Clarke 1991, 91 for a proposed reconstruction of the wall decorations before the suggested repainting of the entire house.
- <sup>49</sup> Moormann 1991, 13 ('d.h. in der Zeit des Vierten Stiles'), 17. For arguments in favor of the idea that the dating of the landscape paintings differs from that of the Italic masonry style decoration, Clarke 1991, 88; see also Laidlaw 1985, 305.; Barbet 1985, 80; Maiuri 1958, 199.
- <sup>50</sup> Contra Clarke 1991, 87 (cited above).
- <sup>51</sup> Moormann 1991, 13. For my statement on this issue, see *infra*.
- <sup>52</sup> See for instance the decorations in this style in the *fauces* of the Casa del Fauno (VI 12, 2) and the Casa della Nave Europa (I 15, 3).
- <sup>53</sup> Maiuri 1958, 200; see also Clarke 1991, 88. For the discovery of the porphyry quarries, see Fant 2007, 336 (my n. 41).
- <sup>54</sup> For the identification of room 15-16 as a *nymphaeum*, see amongst others Pesando/Guidobaldi 2006, 320.
- <sup>55</sup> It regards rooms 5, 6, 7, 15, 16, 17, 18, 23.
- <sup>56</sup> The dating of the floors of the Casa dei Cervi has been topic of discussion, but the results are not unequivocal. See Pesando/Guidobaldi 2006, 449; see also De Kind 1992, 244; Tran Tam Tinh 1988, 84.
- <sup>57</sup> The floor in room 7 shows also pieces of mainly polychrome marbles that cannot be related to the pattern visible in either the rest of this room or in room 12. This may be related to the fact that the house was rebuilt at a certain point in time (see De Kind 1998, 101-103).
- <sup>58</sup> See fig. 15. The fact that the walls of room 16 were painted instead of decorated with marble suggests that this room was slightly less important than room 17.
- <sup>59</sup> Of course, these conclusions are based on just a few case studies. New case studies, which I intend to study in future research, might strengthen or change these conclusions considerably.
- <sup>60</sup> Based on Jongste 1995, Borghini 1998, Claridge 1998 and Fant 2007.



# BIBLIOGRAPHY

- Allison, P.M./F. Sear 2002, *Casa della Caccia Antica* (VII 4, 48) (= *Häuser in Pompeji* 11), Munich.
- Barbet, A. 1985, *La peinture murale romaine. Les styles décoratifs pompéiens*, Paris.
- Borghini, G. (ed.) 1998, *Marmi Antichi*, Rome.
- Bruno, V.J. 1969, Antecedents of the Pompeian First Style, *AJA* 73, 305-317.
- Claridge, A. 1998, *Rome*, Oxford.
- Clarke, J.R. 1991, *The Houses of Roman Italy, 100 B.C. – 250 A.D. Ritual, Space, and Decoration*, Berkeley.
- De Kind, R.E.L.B. 1992, *Huizen in Herculaneum: een analyse van de stedenbouw en de maatvoering in de huizenblokken III en IV*, Nijmegen.
- De Kind, R.E.L.B. 1998, *Houses in Herculaneum: a new view on the town planning and the building of Insulae III and IV*, Amsterdam.
- De Nuccio, M./L. Ungaro (eds) 2002, *I marmi colorati della Roma imperiale*, Venice.
- Dickmann, J.-A. 1999, *Domus Frequentata. Anspruchsvolles Wohnen im pompejanischen Stadthaus*, Munich.
- Dodge, H./B. Ward-Perkins (eds) 1992, *Marble in Antiquity. Collected Papers of J.B. Ward-Perkins*, London.
- Dolci, E. 1988, Marmora Lunensia. Quarrying Technology and Archaeological Use, in Herz/Waelkens (eds) 1988, 77-84.
- Eristov, H. 1979, Corpus des faux-marbres peints à Pompéi, *MEFRA* 91, 693-771.
- Fant, J.C. 2007, Real and Painted (Imitation) Marble at Pompeii, in J.J. Dobbins/P.W. Foss (eds), *The World of Pompeii*, New York, 336-346.
- Gnoli, R. 1971, *Marmora Romana*, Rome.
- Goulet, C.C. 2000, The “Zebra-Stripe” Design. An Investigation of Roman Wall Painting in the Periphery, *AJA* 104, 366-367.
- Guidobaldi, M.P. 2006, *Ercolano. Guida agli Scavi*, Naples.
- Guidobaldi, M.P./A. Salvatori 1988, The Introduction of Polychrome marbles in Late Republican Rome. The Evidence from Mosaic Pavements with Marble Insertions, in Herz/Waelkens (eds) 1988, 171-176.
- Hanoune, R./M. de Vos/A. de Vos 1985, Gli acquarelli pompeiani di F. Boulanger: Casa dei Bronzi, Casa del Labirinto, *MEFRA* 97, 871-878.
- Herz, N./M. Waelkens 1988 (eds), *Classical Marble: Geochemistry, Technology, Trade*, Boston.
- Jansen, G.C.M. 1993, Paintings in Roman Toilets, in E.M. Moormann (ed.) *Functional and Spatial Analysis of Wall Painting*, Leiden, 29-33.
- Jongste, P.F.B. 1995, *Het gebruik van marmer in de Romeinse samenleving*, Leiden.
- Laidlaw, A. 1985, *The First Style in Pompeii. Painting and Architecture*, Rome.
- Laken, L. 2003, Zebra patterns in Campanian Wall Painting: a Matter of Function, *BABesch* 78, 167-189.
- Lauffer, S. 1971, *Diokletians Preisedikt*, Berlin.
- Leach, E.W. 1993, The Entrance Room in the House of Iulius Polybius and the Nature of the Roman Vestibulum, in E.M. Moormann (ed.) *Functional and Spatial Analysis of Wall Painting*, Leiden, 23-28.
- Leach, E.W. 2004, *The Social Life of Painting in Ancient Rome and on the Bay of Naples*, Cambridge.
- Ling, R. 1991, *Roman Painting*, Cambridge.
- Maiuri, A. 1958, *Ercolano; i Nuovi Scavi (1927-1958)*, Rome.
- Mau, A. 1882, *Geschichte der decorativen Wandmalerei in Pompeji*, Berlin.
- Meyboom, P.G.P./E.M. Moormann 2012, *Le decorazioni pittoriche e marmoree della Domus Aurea di Nerone a Roma*, Louvain.
- Michel, D. 1990, *Casa dei Ceii* (I 6, 15) (= *Häuser in Pompeji* 3), Munich.
- Moens, L./P. Roos et al. 1988, A Multi-Method Approach to the Identification of White Marbles Used in Antique Artefacts, in Herz/Waelkens (eds) 1988, 243-250.
- Mols, S.T.A.M. 2005, Il primo stile ‘retrò’: dai Propilei di Mnesicle a Pompei?, in S.T.A.M. Mols/E.M. Moormann (eds), *Omni Pedes Stare; Saggi architettonici e circumvesuviani in memoriam Jos de Waele*, Naples, 243-246.
- Moormann, E.M. 1991, Zwei Landschaftsdarstellungen in der Casa Sannitica in Herculaneum, *KölnJb* 24, 11-17.
- Moormann, E.M. 2009, Pitture parietali nella Villa dei Papiri a Ercolano; vecchi rinvenimenti e nuove scoperte, in A. Coralini (ed.), *Vesuviana. Archeologie a confronto. Atti del Convegno Internazionale (Bologna, 14-16 gennaio 2008)*, Bologna, 153-165.
- Morricone, M.L. 1980, *Scutulata pavimenta: i pavimenti con inserti di marmo o di pietra trovati a Roma e nei dintorni*, Rome.
- Pagano, M. 1996, La nuova pianta della città e di alcuni edifici pubblici di Ercolano, *CronErc* 26, 229-262.
- Pesando, F./M.P. Guidobaldi 2006, *Pompei, Oplontis, Ercolano, Stabia*, Rome.
- PPM = I. Baldassarre (ed.) 1990-1999, *Pompei. Pitture e Mosaici I – X*, Rome.
- Seiler, F. 1992, *Casa degli Amorini Dorati* (VI 16, 7.38) (= *Häuser in Pompeji* 5), Munich.
- Strocka, V.M. 1984, *Casa del Principe di Napoli* (VI 15, 7.8) (= *Häuser in Pompeji* 1), Tübingen.
- Strocka, V.M. 1991, *Casa del Labirinto* (VI 11, 8-10) (= *Häuser in Pompeji* 4), Munich.
- Tran Tam Tinh, V. 1988, *La Casa dei Cervi a Herculaneum*, Rome.
- Waelkens, M./P. de Paepe/L. Moens 1988, Quarries and the Marble Trade in Antiquity, in Herz/Waelkens (eds), 11-28.
- Wallace-Hadrill, A. 1994, *Houses and Society in Pompeii and Herculaneum*, Princeton.

INSTITUTE FOR HISTORICAL, LITERARY AND  
CULTURAL STUDIES  
Radboud Universiteit  
P.O. Box 9103  
NL-6500 HD Nijmegen  
s.vandeliefvoort@let.ru.nl

# Romanisation und *hellenismos* in Thracia

Maria Deoudi

## Abstract

*The Romanisation of Eastern Macedonia and Thracia has left considerable and lasting traces especially in urban construction. Most notably in the middle Imperial period several Greek foundations were changed massively through new building activities. The integration of new influences is especially evident in privately commissioned monuments. Direct insight into these complex acculturation processes, which were mainly tied to urban centres, are thus provided by small and locally concentrated groups of monuments with the image of the Thracian huntress and the Thracian rider. These monuments stand for the variety of cultural developments in these regions. Due to the selection of specific iconographical variables they were visible manifestation of the innovative art traditions which also stood for new locally defined values which could be regarded as a newly developed Macedonian-Thracian formal vocabulary.*

Die Romanisation der Provinz Thracia ist primär ein historischer Fakt und die gravierenden Veränderungen sind fast ausschließlich vor dem Kontext der städtebaulichen Maßnahmen bewertet worden. Die Transformationen in der Kunst und Votivtradition vor Ort bleiben in dieser Diskussion weitgehend unberücksichtigt. Dabei begründete die Romanisierung gerade in Thracia weitreichende Veränderungen, wobei diese nicht nur die Auseinandersetzung mit der eigenen griechischen Vergangenheit unter römischer Herrschaft darstellt. Vielmehr muss den griechischen Traditionen die thrakische Formsprache als Zeugnis einer indigenen Kultur zur Seite gestellt werden. Erst in der Summe ergeben die Strömungen letztlich die Konstruktion einer neuen sozialen und kulturellen Identität, die in einem veränderten, von Römern geprägten Umfeld entsteht und eine eigene teilweise auch eigene Formsprache entwickelt, die den Bedürfnissen ganz unterschiedlicher Bevölkerungsgruppen genügen konnte.

Sichtbares Zeugnis und Beweis für eine thrakische Kultur, die ansonsten auf materieller Ebene kaum fassbar ist, und für eine eigene lokale (Bild- und Kult-)Tradition steht, sind die Bilder der thrakischen Gottheiten *Artemis-Bendis* sowie die des *thrakischen Reiters*. Beide Figuren sind in der antiken griechisch-römischen Welt außerhalb der Grenzen der Provinz Thracia durchaus bekannt, jedoch beschränkten sich ihre Bedeutung, ihr Ansehen und auch ihr Kult weitestgehend auf den kulturellen Raum Thracias. Somit stehen *Artemis-Bendis* und der *thrakische Reiter* viel ausgeprägter als dies bei lokalen Gottheiten in anderen Landschaften der Fall zu sein scheint, für in Ausschnitten fassbare, indigene religiöse Vorstellungen.

Während man inhaltlich für beide Figuren weitgehend einen Synkretismus vermuten kann, bei dem beide thrakischen Gottheiten auf vielfältige Weise in die griechische und römische Welt integriert werden konnten, nicht zuletzt auch mit neuen Inhalten versehen wurden, zeigt die formal ikonographische Untersuchung eine tiefe Verwurzelung in der griechischen und auch römischen Kunst, der die thrakischen Elemente als Teil eines weitgefassten, verwobenen Prozesses erscheinen lässt, denn als Entwicklung, bei der die einzelnen Aspekte unverbunden nebeneinander stehen.

## DIE THRAKISCHE JÄGERIN UND DER *HELLENISMOS*

Seit dem 2. Jahrhundert n.Chr. erscheint, konzentriert auf das politische und kulturelle Zentrum Philippopolis in der Provinz Thracia, auf Steinstele das Bild einer leicht bewaffneten Jägerin, die mit Pfeil und Bogen ausgestattet, bekleidet mit einem kurzen Chiton und Stiefeln, ein Rotwild verfolgt. Keine der Stelen wurde in originären Kontexten entdeckt, so dass eine Bestimmung der Funktion nur anhand der Bildformel auszumachen ist. Im Bild ist bei der Jägerin der Moment wiedergegeben, in dem sie Pfeil und Bogen bereit hält und im schnellen Lauf im Begriff ist, das Tier zu erlegen.<sup>1</sup> Begleitet wird sie bei der Jagd von einem Hund, der ebenfalls das Tier zu stellen versucht. Nur in wenigen Fällen wurde dieses Grundmotiv verändert, ohne dass die grundsätzlich angestrebte Aussage aufgegeben wurde. Von den rund 100 Stelen, die dieses Motiv aufweisen, seien hier exemplarisch und exemplarisch folgende Stelen genannt.

1. Bildstele (S1) (Abb. 1)<sup>2</sup>

Zentral in der Bildmitte ist eine weibliche Figur im Chiton zu sehen. Unterhalb der Brust in der Hüfte ist das Gewand gegürtet. Die Haare sind zu einem Knoten gebunden, der sichelartig auf dem Kopf erscheint. Um die Brust hat sie einen Köcher gegürtet. In der linken, nach außen angewinkelten Hand hält sie einen Bogen. An den Füßen trägt sie kurze Stiefel. Während der Oberkörper frontal dem Betrachter zugewandt ist, läuft sie nach vorne. Der rechte Arm ist angewinkelt, wobei die Handinnenfläche nach außen gedreht ist. Gestaffelt hinter der Frau ist eine Hirschkuh und unter dem Wild ein Hund zu sehen. Beide Tiere sind im schnellen Lauf dargestellt.

2. Bildstele (S2) (Abb. 2)<sup>3</sup>

Zentral ist eine weibliche Figur im Chiton zu sehen. Unterhalb der Brust in der Hüfte ist das Gewand gegürtet. Um die Brust hat sie einen Köcher geschnallt. In der linken, nach außen angewinkelten Hand hält sie einen Bogen. An den Füßen trägt sie kurze Stiefel. Während der Oberkörper frontal dem Betrachter zugewandt ist, läuft sie nach vorne. Die Haare sind zu einem Knoten gebunden, der sichelartig erscheint. Der rechte Arm ist angewinkelt, wobei die Handinnenfläche nach außen gedreht ist. Vor der Frau ist eine Hirschkuh und ein Hund zu sehen. Beide Tiere sind im schnellen Lauf dargestellt.

3. Bildstele (S10) (Abb. 3)<sup>4</sup>

Es handelt sich hierbei um eine abgerundete Platte mit einfacher Bodenlinie. Die Außenränder sind bestoßen. Die ursprüngliche Stelenrahmung ist nicht mehr rekonstruierbar; man muss annehmen, dass keine Randgliederung vorgenommen wurde. Die Rückseite ist stark geglättet.

Zentral abgebildet ist eine weibliche Figur, die nach vorne schreitet und das linke Bein vorsetzt. Der Körper ist in dreiviertel Ansicht nach vorne gedreht. Bekleidet ist sie mit einem kurzen, hoch gegürteten Peplos und Stiefeln. Mit der rechten Hand zieht sie einen Pfeil aus dem Köcher, in der vorgestreckten linken Hand ist ein Bogen zu rekonstruieren. Die Haare sind zu einem kleinen Nackenknoten gerollt. Vor ihr steht ein Hirsch.

4. Bildstele (S18) (Abb. 4)<sup>5</sup>

Nach oben sich verjüngende, leicht abgerundete Stele mit leicht vorgezogener Bodenlinie. Ränder sind bestoßen. Die Rückseite war unbearbeitet. Die Oberfläche ist leicht bestoßen, war aber innerhalb des Bildfelds größtenteils geglättet. Ovals Bildfeld ohne erkennbare Rahmung.

Das Bildfeld wird zentral von einer weiblichen Figur eingenommen, die *en face* dem Betrachter zugewandt ist, wobei sie gleichzeitig nach rechts läuft. Bekleidet ist sie mit einem kurzen, hoch gegürteten Ärmelchiton mit langem Überfall und kurzen Stiefeln. Sie hat ein breites Gesicht. Es dominieren im Gesichtsfeld die stark



Abb. 1. S1: Die thrakische Jägerin, Historisches Museum Sofia, Bulgarien.



Abb. 2. S2: Die thrakische Jägerin, Historisches Museum Sofia, Bulgarien.





Abb. 3. S10: Die thrakische Jägerin, Historisches Museum Sofia, Bulgarien.



Abb. 4. S18: Die thrakische Jägerin aus Stanvica, Bulgarien. Heute verschollen.

hervortretenden Augen. Die Haare sind nach oben gesteckt. Sie hat einen Köcher über die rechte Schulter gebunden. Im linken, leicht ausgestreckten Arm hält sie den Bogen. Mit der rechten Hand greift sie nach einem Pfeil auf ihrem Rücken. Begleitet wird sie von einem Hund, vor ihr läuft ein Hirsch.

Anhand vereinzelter Weihinschriften weiß man, dass auf diesen Weihtafeln Bendis dargestellt ist, die in Nordgriechenland mit Artemis/Diana gleichgestellt wurde. So handelt es sich eindeutig um Votivstelen. Zugleich ist bekannt, dass Artemis/Bendis gemeinsam mit ihrem Bruder zu den wichtigsten Göttern Thracias gehörte und zudem dem offiziellen Pantheon der Stadt Philippopolis angehörte. Das vermag die hohe Konzentration der Denkmäler in diesem geokulturellen Kontext zu erklären, auch wenn originäre Aufstellungskontexte nicht mehr rekonstruiert werden können. Insgesamt jedoch war die Jägerin in dieser ikonographischen Ausprägung auch außerhalb des Raumes um Philippopolis ein bekanntes und oft verwendetes Motiv. So begegnet dieses Bild der Jägerin in römischer Zeit auf Münzen an verschiedenen Orten aus der gesamten Provinz Thracia.<sup>6</sup> In einem Zeitraum vom 2. Jahrhundert bis zum 3. Jahrhundert n.Chr. erscheint das Motiv 'laufende Jägerin mit Pfeil und Bogen' u.a. auf Emissionen aus Augusta Trajana, die in diesem Fall während der Regentschaft des Septimius Severus geprägt wurden.<sup>7</sup> Gleichfalls ist dieses in Philippopolis nachgewiesen, wo es sich um Prägungen handelt, die im 2. Jahrhundert n.Chr. entstanden.<sup>8</sup> Beide Beispiele vermitteln einen ersten Eindruck über die weite und auch lang währende Verbreitung dieser spezifischen Darstellung der Jägerin innerhalb der Provinz Thracia.

Obgleich die Weihtafeln schon aus formalen Gründen keine direkten Kopien der Münzbilder sind, fallen ikonographische wie auch motivische Parallelen auf, die für beide Medien Rückschlüsse auf mögliche Vorlagen erlauben. Diese Bildvorlagen, die ganz offensichtlich sowohl den Darstellungen auf den Emissionen als auch den Stelen und Felsbildern mit der Darstellung der thrakischen Jägerin zugrunde gelegt wurden, greifen zurück auf spätclassische Werke der griechischen Kunst. In diesem Fall erinnern die Abbildungen an die Statue der Artemis des Leochares (Abb. 5).<sup>9</sup> Sie gehört zu den großen Schöpfungen der antiken Bildhauerkunst des 4. Jahrhunderts v.Chr. und ist in zahlreichen römischen Kopien überliefert. Im Grunde prägt eben dieses Bildwerk bis in die Neuzeit die Vorstellungen über die Göttin.<sup>10</sup> Das Bild war ausgesprochen populär und es ist anzunehmen, dass Kopien dieses statuarischen



Abb. 5. Artemis des Leochares im Typ Versailles, Athen NM (Inv. Nr. 3567).

Typus auch in Thracia und speziell in Philippopolis gestanden haben und bekannt waren.

Bei der Herstellung der Stelen mag die Wahl zu Gunsten des Bildes des Leochares sicherlich in der Berühmtheit des Bildes verankert sein. Dabei ist die hier formulierte Verbindung zwischen den Stelen und dem spätklassischen griechischen Werk keineswegs ein isoliertes oder sogar einmaliges Phänomen in Thracia. Ganz allgemein ist zu beobachten, dass die Römer bei der Schaffung von religiösen Bildern gerne auf bekannte Bildformeln des 4. Jahrhunderts v. Chr. zurückgriffen. In römischer Zeit werden statuarische Typen jener Götter- und Heroenbilder bevorzugt und auch propagiert, die weit verbreitet waren.<sup>11</sup> Betrachtet man die Münzen der Stadt Philippopolis offenbart sich, dass aus der reichen Bildtradition, u.a. für Apollon, gerne auf einen spätklassischen Typus des Apollon Sauroktonos zurückgegriffen wurde, während sich die Bilder der Göttin Eirene an die gleichnamige Skulptur des Bildhauers Kephisodot anlehnen.<sup>12</sup>

Der Rückgriff auf klassische Vorbilder, der sich an den Stelen ablesen lässt, war Teil eines allgemeinen Klassizismus, der die Kunstlandschaft Thracias bestimmte.

Von der spätklassischen Statue der Artemis wird für die Weihetafeln vor allem das statuarische Motiv übernommen, bei dem die Jägerin im schnellen Laufschrift wiedergegeben ist, sie gleichzeitig im Gehen mit der rechten Hand nach hinten greift und einen Pfeil aus dem Köcher zieht. Neben ihr läuft ein Reh, das in diesem Fall allerdings

nicht die Beute darstellt, sondern sie begleitet.

Nichts deutet in der Gegenüberstellung der römischen Stelen und dem spätklassischen Bild darauf hin, dass versucht wurde, eine unmittelbare Kopie der Statue des griechischen Künstlers zu fertigen. Dies lässt sich, wie auch in anderen Provinzen, weniger mit den jeweiligen handwerklichen Fähigkeiten der Werkstätten erklären, sondern war Teil einer beabsichtigten und bewusst eingesetzten Rezeption antiker Werke der unmittelbaren Vergangenheit.<sup>13</sup> Diese zielt offensichtlich nicht auf eine getreue Wiedergabe im Sinne einer Kopie eines Bildes, sondern beschränkte sich auf die Übernahme seiner prägnanten Merkmale, hier *Artemis im Typus der Jägerin*, die dem antiken Betrachter ein Wiedererkennen erlaubt. Gleiches gilt u. a. auch für die Bilder des Gottes Apollon, Herakles und Eirene.

Die Wahl eines klassischen Vorbildes als Zeichen für das eigene zeitgenössisch römische Verständnis von 'vorbildhaft' ist darüber hinaus ein prägnantes und signifikantes Merkmal des Klassizismus in dieser Zeit, das bei der Formulierung des Bildtypus berücksichtigt wurde. Allerdings erklärt sich die Anlehnung an das spätklassische Werk nicht allein anhand der aufgezeigten äußerlichen Merkmale sondern ist auch inhaltlich begründet. Der Grund für die Wahl dieses Bildes ergibt sich primär durch die religiöse Tradition in dieser Landschaft Thracia. So existierte im Norden eine lange Tradition der Gleichsetzung zwischen der olympischen Artemis und der thrakischen Bendis, die sich auch in den antiken Quellen wiederfindet. Bei der Wahl des Götterbildes zur Darstellung der thrakischen Bendis hat eben dies auch eine Rolle gespielt. In diesem Zusammenhang wurde auch mehrfach darauf hingewiesen, dass die kultischen Eigenschaften zwischen den beiden Gottheiten größtenteils identisch waren. So ist Artemis - wie auch Bendis - stark eingebunden in den Zyklus weiblicher Fruchtbarkeit. Das gilt allerdings nicht nur für den Kult in ihrer Heimat, sondern lässt sich auch in Athen selbst nachweisen, wo Bendis kultische Ehren empfing, und trifft gleichermaßen für die meisten Orte in der antiken Welt zu, die kulturell von Athen beeinflusst waren.<sup>14</sup> Eine Abweichung sieht man allerdings dergestalt, dass in Griechenland Artemis in der Gestalt der Jägerin vor allem als jungfräuliche Göttin galt, während im thrakischen Kulturraum sich in der Gestalt der Jägerin eher die Naturverbundenheit der indigenen Bevölkerung widerspiegelt. Traditionell religiöse Werte (Artemis/ Bendis) und lokale Werte (Naturverbundenheit) vereinen sich in diesem Bild und



erklären auch seine Bekanntheit und lange Verbreitung in der Provinz Thracia.

#### DER THRAKISCHE REITER UND DIE ROMANISATION

In einer auffälligen Gleichzeitigkeit erscheint in derselben römischen Provinz das Bildmotiv des *thrakischen Reiters*.<sup>15</sup> Der Befund ist um ein vielfaches größer als der der *Artemis/Bendis*, wobei auch hier die originären Kontexte nicht auszumachen sind. *En gros* lässt sich eine vorwiegend religiöse Nutzung anhand der Inschriften auf den Denkmälern rekonstruieren. Der thrakische Reiter war nicht nur ein Votiv, das ganz unterschiedlichen Göttern geweiht wurde, sondern es wurde zugleich auch in der Sepulchralkunst eingesetzt.

Vielleicht erklärt gerade die große Spannbreite der Verwendungsmöglichkeiten, dass der thrakische Reiter, anders als die thrakische Jägerin, auch in den angrenzenden nördlichen römischen Provinzen verbreitet war und insgesamt einen weit aus größeren Aktionsradius besaß. Allen Stelen ist indes das Grundmotiv der Darstellungen gemeinsam. Es handelt sich um die Abbildung eines Reiters auf einem Pferd, der im schnellen Lauf davon reitet. In den meisten Fällen gibt der Reiter seinem Pferd hart die Sporen, so dass es sich unter dem Druck aufbäumt und davon preschen wird. Das ausgeprägte Bewegungsmotiv führt dazu, dass der Mantel, den der Reiter um die Schulter trägt sich weit nach hinten bauscht. Von den zahlreichen Stelen, die dieses Motiv aufweisen, seien hier exemplarisch folgende Stelen genannt, die stellvertretend sind für die genannte Gattung. Alle Beispiele sind ins 2. Jahrhundert n.Chr. zu datieren.

##### 1. Bildstele (S 359) (Abb. 6)<sup>16</sup>

Es handelt sich hierbei um eine quadratische Platte mit einfacher Bodenlinie. Die Außenränder sind bestoßen. Die ursprüngliche Stelenrahmung ist nicht mehr rekonstruierbar, man muss annehmen, dass keine Randgliederung vorgenommen wurde. Die Rückseite ist stark geglättet.

Das Bildfeld wird eingenommen von der Figur eines Reiters, der in einer Dreiviertelansicht abgebildet ist. Er hat den rechten Arm erhoben und hält mit der Linken die Zügel seines Pferdes, das sich aufbäumt und nach vorne drängt. Die Vorderläufe des Tieres sind erhoben und mit dem rechten vorderen Lauf schneidet er die Bildrahmung.

Am rechten Bildrand und nach hinten versetzt steht ein Baum.



Abb. 6. Stele des thrakischen Reiters aus Cumpana, Bulgarien.

##### 2. Bildstele (S 361) (Abb. 7)<sup>17</sup>

Es handelt sich hierbei um eine quadratische Platte mit einfacher Bodenlinie. Die Außenränder sind bestoßen. Die ursprüngliche Stelenrahmung ist nicht mehr rekonstruierbar; man muss annehmen, dass keine Randgliederung vorgenommen wurde. Die Rückseite ist stark geglättet.

Das Bildfeld wird eingenommen von der Figur eines Reiters. Er hat den rechten Arm erhoben und hält mit der Linken die Zügel seines Pferdes, das sich aufbäumt und nach vorne drängt. Der Reiter ist stark von der Seite abgebildet und blickt zum rechten Bildrand. Die Vorderläufe seines Pferdes sind erhoben und mit dem rechten Lauf schneidet er die Bildrahmung.

Am rechten Bildrand und nach hinten versetzt steht ein Baum.

##### 3. Bildstele (S 362) (Abb. 8)<sup>18</sup>

Es handelt sich hierbei um eine quadratische Platte mit einfacher Bodenlinie. Die Außenränder sind stark bestoßen. Die ursprüngliche Stelenrahmung ist nicht mehr in allen Details rekonstruierbar, sichtbar sind aber die einfachen Ranken, die die Außenränder schmücken. Die Rückseite ist stark geglättet.

Das Bildfeld wird eingenommen von der Figur eines Reiters. Er hat den rechten Arm erhoben und hält mit der Linken die Zügel seines Pferdes, das sich aufbäumt





Abb. 7. Stele des thrakischen Reiters aus Cumpana, Bulgarien (Oppermann privat).



Abb. 8. Stele des thrakischen Reiters aus Tomis, Bulgarien.

und nach vorne drängt. Der Reiter ist stark von der Seite abgebildet und blickt zum rechten Bildrand. Die Vorderläufe seines Pferdes sind erhoben und es ist der Moment wiedergegeben, wie das Pferd davon prescht.

#### 4. Bildstele (Abb. 9)<sup>19</sup>

Es handelt sich hierbei um eine flache freiplastische Darstellung der Figur des thrakischen Reiters. Die

Rückseite ist geglättet. Er hat den rechten Arm erhoben und hält mit der Linken die Zügel seines Pferdes, das sich aufbäumt und nach vorne drängt. Die Vorderläufe des Tieres sind erhoben.

Auffällig, dass das Bild des Reiters nicht durch Münzemotionen der Provinz Thracia bekannt ist, was ihn in einem wesentlichen Punkt von der Figur der thrakischen Jägerin unterscheidet. Offensichtlich handelt es sich nicht um ein Bildmotiv, das in der thrakischen Kunst verankert war, da dieses Bildmotiv eine lange ikonographische Tradition aufnimmt, die in diesem Fall jedoch im römischen Kunstkreis fußt.

Allgemein entstammen derartige Reiterdarstellungen, wie sie dem Bild des Thrakers zu Grunde liegen, dem reichen Repertoire der Schlachtenbilder der römischen Kaiserzeit. Beispielhaft sei hier auf die Darstellung des Kaisers auf der Trajanssäule hingewiesen. Die hoch emotionale Darstellung des Reiters/Kaisers transportiert als Aussage vor allem die Überhöhung des Reiters/Kaisers. Zugleich sind es Darstellungen von Vernichtungsschlachten, bei denen die Feinde zu Grunde gerichtet werden. Diese ursprüngliche Verherrlichung des gewalttätigen Umgangs mit dem Feind ist in der römischen Kunst fester Bestandteil der Kampf- und auch Siegespanegyrik der römischen Staatskunst, die im gesamten römischen Reich rezipiert wurde.<sup>20</sup> Von diesen Gewaltbildern hat sich die Bild des thrakischen Reiters entschieden getrennt, zumal auf keiner Stele ein Feind abgebildet ist, der durch den Reiter vernichtet wird. Modus und Habitus weisen aber in evidenter Weise darauf hin, dass man diese Darstellungsweise als Bildnucleus zitiert. Der thrakische Reiter lehnt sich formal an diese Siegespanegyrik an und verwendet somit allgemein eine imperiale Bildsprache. Entsprechend erscheint der Thraker, wie man es auch von Kaiserdarstellungen kennt, als universeller Sieger, völlig vom Feind abgehoben, oder wie in Thracia, ohne realen Bezug zu einem Feind. Die Einheit von Raum und Zeit spielt keine Rolle mehr und eine konkrete narrative Einbindung in eine historische oder mythische Szene ist bei den Darstellungen des thrakischen Reiters aufgehoben, vielleicht war sie auch nicht beabsichtigt. Die ursprünglich derartigen Abbildungen zugrunde liegenden Bilder von Kampf, Bestrafung und Verfolgung sind hier nicht mehr Teil des Bildes und wahrscheinlich auch nicht mehr relevant. Nur so erklärt sich auch, dass der Bildnucleus auf numerisch derart vielen Stelen zu sehen ist, die je nach den beabsichtigten Aussagen des Auftraggebers den Reiter mit anderen Attributen versehen konn-



Abb. 9. Reiterheros, Archäologisches Museum Varna, Bulgarien.

ten, die keinen Bezug zur ursprünglichen Bildformel haben.<sup>21</sup>

Anders als in der römischen Staatskunst, und darin mag man auch einen lokalen und spezifischen Umgang mit der Bildvorlage sehen, verliert die Darstellung bei der Abbildung des thrakischen Reiters den Aspekt der Grausamkeit und der Härte. Dennoch erscheint die Figur in der Siegerpose. Diese Übernahme eines Bildmodus aus dem Bereich der öffentlichen Kunst in die Sphäre privater Darstellungen sieht man in dieser Hinsicht an vielen Beispielen. Zunehmend werden Soldaten auf den Grabstelen als glorreiche Reiter im Sinne des Kaisers dargestellt. Wahrscheinlich würde bei einer prosopographischen Untersuchung deutlich werden, dass die wenigsten der Dargestellten real als Reiter gedient haben.

Es ist anzunehmen, dass eine Beziehung zwischen der Darstellung und dem Auftraggeber zunehmend in den Hintergrund tritt. Für den thrakischen Reiter scheint dies schon aufgrund der immensen Anzahl der Stelen erwiesen, wie auch deren weit gefächerte Ausschmückung. Ganz unterschiedliche Elemente und Attribute schmücken die Stelen und sie werden wohl auch in ebenso viele private wie auch öffentlich-religiöse Kontexte eingebunden gewesen sein.

Die ausgewählten Beispiele zeigen, auf welche vielfältige Art der Prozess der Romanisierung in Thracia die lokale Kunst und das Kunsthandwerk prägte. Gleichwohl offenbart sich, auf welche Weise in historischen Umbruchssituationen Kunst für die Konstruktion einer neuen Identität genutzt werden konnte. Das Gemeinwesen, dessen politische und soziale Struktur im Wandel begriffen war, schuf sich unter dem Einfluss der neuen römischen Maßgaben Kunstwerke, die ebenso ein Konstrukt darstellten, wie auch die Bevölkerung selbst es war. Es entstehen erst durch die Einverleibung der Landschaft in das römische Reich Bilder von den alten lokalen Gottheiten, die es zuvor in der Kunst und im Kunsthandwerk im Königreich der Thraker nicht gegeben hat, bzw. die bis heute nicht bekannt sind. Man bediente sich bei der Kreation dieser neuen Bilder vor allem derer der alten Götter der griechischen Kunst bzw. der aktuellen imperialen Bildsprache.

So ziert die thrakische Jägerin ein spätklassisches Kunstwerk der Artemis, wie u.a. auch ihr Bruder Apollon bevorzugt nach den Vorlagen eines praxitelischen Werkes im Bild wiedergegeben wurde. Die Wahl des Bildmotivs diente allem Anschein nach primär der Wiedererkennbarkeit. Darüber hinaus trägt die Angleichung an Artemis der literarischen Überlieferung Rechnung, ermöglicht aber auch eine Adaption verschiedenster kultischer Eigenschaften. Für die Thrakerin gilt, dass der Aspekt der Fertilität durch die Verbindung zu Artemis zum Tragen kam. Gleichzeitig war zumindest die Thrakerin durch ihre Darstellung als Jägerin auch eine Visualisierung thrakischer Eigenschaften, zu denen eben die Jagd gehörte, so dass sie in der Folge wahrscheinlich auch von Männern kultisch verehrt werden konnte. Gleichartige Mechanismen lassen sich u.a. auch für Apollon ausmachen, der in Philippopolis mit der Epiklese Kendrisos, eines lokalen Gottes verehrt.

Die Übernahme lokaler Kulttraditionen bewirkte, dass die Götter von ganz unterschiedlichen Bevölkerungsgruppen akzeptiert und übernommen werden konnten.

Romanisierung bedeutet für Thracia in dieser Hinsicht, und in Bezug auf die Darstellung der *Artemis/Bendis*, ein zur Schau getragener *hellenismus* im Sinne der Bildübernahme und in Bezug auf die Adaption bewusster Praktizierung griechischer Religiosität und Lebensart, die erweitert wurde um die indigenen Merkmalen der Thraker.

Der thrakische Reiter dagegen ist die Übernahme eines imperialen Bildchiffre, das ebenfalls in den eigenen Kulturkreis übertragen und dort auf vielfältigste Weise gelesen werden konnte. Es

war sowohl in den öffentlichen als auch privaten Kultbereich integrierbar. Der numerisch so große Bestand an Stelen mit diesem Bildmotiv legt nahe, dass nicht nur eine bestimmte Personengruppe dieses Motiv für sich nutzen konnte. In diesem Zusammenhang ist es eine bewusst zur Schau getragene Adaption römischer Elemente in neuen lokalen Kontexten. Auch hierbei handelt es sich nicht um ein isoliertes oder gar einmaliges Phänomen, da die Förderung römischer Kulte - und vor allem die Verwendung römischer Bildwerke - an vielen Orten der Provinz belegt ist.

Beide Formen, sowohl der Rückgriff auf klassische Vorlagen als auch die Verwendung zeitgenössischer römischer Bildformeln sind Mittel zur sozialen Distinktion und helfen die eigenen Werte in neue Bildformeln zu übertragen. Ob diese neuen Begriffe auch in der Weise zu lesen sind, dass zunehmend die ethnische Zugehörigkeit zu Gunsten eines neuen sozialen Status aufgegeben wird, ist für Thracia noch nicht untersucht worden, deutet sich aber an. Betontes Griechentum und Loyalität gegenüber dem Reich und Kaiser ist jeweils und gleichermaßen in den Bildern verankert. Es markiert eine neue universelle Bildsprache in der Provinz Thracia.

#### ANMERKUNGEN

- <sup>1</sup> Deoudi 2010 passim
- <sup>2</sup> Deoudi 2010, 122 Nr. S1, Taf. 19.
- <sup>3</sup> Deoudi 2010, 122 Nr. S2, Taf. 19.
- <sup>4</sup> Deoudi 2010, 127 Nr. S10, Taf. 24.
- <sup>5</sup> Deoudi 2010, 131 Nr. S 8, Taf. 27.
- <sup>6</sup> Zu Perinthos: Sayar 1998. Zu Nicopolis: Poulter 1995; Ivanov 1998, 143-153. Die Münzen: Komnik 2003, 43 Taf. 3 R 56. Zu Augusta Trajana: Buyukliev 1997, 231-220.
- <sup>7</sup> Schönert-Geiss 1991, 47 Nr. 63.
- <sup>8</sup> Kolev 1991, 510-525.
- <sup>9</sup> Kaltsas 2002, 250 Abb. 520.
- <sup>10</sup> Johnson 1981, 13-45.
- <sup>11</sup> Karanastassis 1986, 270-291; 1987, 323-428; Zu Philippopolis: Kolev 1991, 510-525 bes. 522-523, Taf. 3.10.
- <sup>12</sup> Kolev 1991, 515 mit Anm. 17.
- <sup>13</sup> Schörner 2003, 192 mit Literatur auf S. 40
- <sup>14</sup> Deoudi 2010, 145.
- <sup>15</sup> Boteva-Boyanova 2000, 961-972; Oppermann 1992, 1073-1077, wobei die aufgeführten Stelen in dieser Publikation nicht aufgenommen sind. Vollständig in Bezug auf die gewählten Beispiele: Oppermann 2006, passim
- <sup>16</sup> Oppermann 2006, 333 Nr. 359 Taf. 32.
- <sup>17</sup> Oppermann 2006, 333 Nr. 361 Taf. 32.
- <sup>18</sup> Oppermann 2006, 333 Nr. 362 Taf. 32.
- <sup>19</sup> Ivanov 2008, 63 Abb. 59.
- <sup>20</sup> Zanker 1998, 53-70.
- <sup>21</sup> Boteva-Boyanova 2000, 961-972.

#### BIBLIOGRAPHIE

- Boteva-Boyanova, D. 2000, The Votive Reliefs of the Thracian Horseman as a Sign System: An Attempt at Modeling Thracian Mythology, in J. Bernard / P. Grzybek (Hrsg.), *Modellierung von Geschichte und Kultur, Akten des 9. Symposiums der Österreichischen Gesellschaft für Semiotik*. Graz 22. – 24.11.1996. (Angewandte Semiotik 16/17) Bd. 2, Vienna, 961-972.
- Buyukliev, C. 1997, Le culte d'Apollon à Augusta Trajana et dans son territoire, in *Αρχαία Θράκη. Actes du 2eme Symposium International des Etudes Thraciennes* 20.09 - 27.09.1992 Komotini, Komotini, 213-220.
- Deoudi, M. 2010, *Die thrakische Jägerin. Römische Steindenkmäler aus Macedonia und Thracia* (Peleus, Studien zur Archäologie und Geschichte Griechenlands und Zyperns Bd. 51), Ruhpolding.
- Ivanov, R. 1998, Nicopolis ad Istrum, Eine römische und frühbyzantinische Polis in Thrakien und Niedermösien, *AW* 29, 445-450.
- Ivanov, R. 2008, *Eine römische Provinz auf der Balkaninsel, Orbis Provinciarum – Die Provinzen des römischen Reiches*, Mainz.
- Johnson, B. 1981, *Lady of the Beasts. Ancient Images of the Goddess and her Sacred Animals*, San Francisco.
- Kaltsas, N. 2002, *Τα Γλυπτά. Εθνικό Αρχαιολογικό Μουσείο*, Athens.
- Karanastassis, P. 1986, Untersuchungen zur kaiserzeitlichen Plastik in Griechenland I. Kopien und Umwandlungen nach Aphrodite-Typen des 5. Jhs. v. Chr., *AM* 101, 270-291.
- Karanastassis, P. 1987, Untersuchungen zur kaiserzeitlichen Plastik in Griechenland II. Kopien und Umwandlungen nach Athena-Typen des 5. Jh. v. Chr., *AM* 102, 323-428.
- Kolev, K. 1991, Kopien griechischer Skulpturen auf Münzen von Philippopolis, *Klio* 73, 510-525.
- Komnik, H. 2003, *Die Münzprägung aus Nicopolis ad Maestum*, Berlin.
- Oppermann, M. 1992, Der Heros Equitans im Ostbalkanraum, *LIMC* VI, 1073-1077.
- Oppermann, M. 2006, *Der Thrakische Reiter des Ostbalkanraumes im Spannungsfeld von Graecitas, Romanitas und lokalen Traditionen*, Langenweißbach.
- Poulter, A. 1995, *Nicopolis ad Istrum. A Roman, Late Roman and Early Byzantine City. Excavations 1985-1992*, London.
- Sayar, M.H. 1998, *Perinthos-Herakleia und Umgebung. Geschichte, Testimonien, griechische und lateinische Inschriften*, Vienna.
- Schönert-Geiss, E. 1991, *Die Münzprägung von Augusta Trajana und Traianakopis* (Schriften zur Geschichte und Kultur der Antike 31), Berlin.
- Zanker, P. 1998, Die Barbaren, der Kaiser und die Arena. Bilder der Gewalt in der römischen Kunst, in R.P. Sieferle / H. Breuninger (Hrsg.), *Kulturen der Gewalt. Ritualisierung und Symbolisierung von Gewalt in der Geschichte*, Frankfurt, 53-86.

INSTITUT FÜR KLASSISCHE ARCHÄOLOGIE  
UND ANTIKENSAMMLUNG DER UNIVERSITÄT  
KOCHSTRASSE 4/19  
91054 ERLANGEN  
mariadeoudi@web.de



## Reviews

JOHN W. HAYES, *Roman Pottery. Fine-ware imports*. Princeton NJ: The American School of Classical Studies at Athens, 2008. 343 pp., 56 figs, 91 pls, 2 plans; 31 cm (The Athenian Agora XXXII). – ISBN 978-0-87661-232-3.

Producing a comprehensive typology of Roman fine-ware imports from excavations at the Athenian Agora is no mean feat. This catalogue, which presents material excavated from the 1930s until 1968, has been some seventy years in the making. The author, John W. Hayes, highlights the contribution of Henry S. Robinson, who first conceived of the idea for a volume on Roman ceramic typology to accompany his 1959 volume on chronology (*Pottery of the Roman Period: Chronology. Agora 5*). It is perhaps this long gestation period, and the concurrent accumulation of new finds and changes in research priorities, that prompt Hayes to open with the sentence: 'This volume is self-confessedly outmoded in its approach' (p. 1). Yet, this seemingly unpromising admission might equally be read as a statement of confidence in the utility and integrity of the contents – and perhaps also a playful pride on the author's part in being outmoded.

Just as Athens is physically situated between Italy and the Aegean, these regions were the source of most ceramic imports, with the addition of North Africa (modern Tunisia) in late antiquity. Fluctuations in the origin of the earlier sigillata imports can be traced with some precision thanks to accurate dating, particularly of Italian wares. A peak in the importation of Italian Sigillata occurs in AD 10-40 after which Anatolian products, especially Eastern Sigillata B, predominate (p. 9). From the mid-2<sup>nd</sup> century, locally made table wares appear to supplant imports until the arrival of African Red Slip ware in the mid-3<sup>rd</sup> century, whose dominance is only surpassed in the 5<sup>th</sup> century by Phocian Red Slip. By the late 5<sup>th</sup> century, Phocian bowls and dishes are said to account for some 80%-90% of imported fine-ware (p. 85).

The ebb and flow of imports from different production centres and in relation to local products highlights particular and general trends in the economy of Roman Athens and the wider Mediterranean. For example, Çandarlı Ware, produced from ca AD 100 on the west coast of Turkey, appears to constitute a chronological bridge between the Early Roman sigillata types made around Pergamon and the later red-slipped wares, especially Phocian, which Hayes calls 'a late and successful offshoot of [the industry] at nearby Çandarlı' (p. 83). The presence of Çandarlı bowls at Athens in a context associated with the Herulian destruction of AD 268 provides a late date for these products (p. 52), but still accords with the ware's decline in relation to the rise of African products.

Close observation of fabrics, shapes, production techniques and decoration reveals several technological and stylistic trends such as changing fabric qualities and firing techniques at long-lived production cen-

tres, the use of moulds and stamps, and widespread 'imitation' across regions. One recurring theme is the close relationship of fine-ware forms with metalwork, with the shape and appearance of vessels deriving sometimes directly from metal objects. Ceramic skeuomorphism is evident in products of both the early and later Roman period, and is noted particularly for classes of Eastern Sigillata A and B (pp. 17; 33-34), Pergamene cups (p. 51) and African Red Slip ware (pp. 71; 74-75), as well as a group of mould-made platters which are termed Red-Gloss Platters Imitating Metalwork that 'closely imitate the relief-decorated silverware of 2<sup>nd</sup>-3<sup>rd</sup> century date' (pp. 55-56). Copying within the ceramic medium also occurred throughout the Roman period. The mutual influence of Italian and Eastern sigillata styles is noted for several of the 1<sup>st</sup>-century AD types. Pergamon wares are highlighted as resembling Italian Sigillata more closely than any other eastern product, which is 'ascribed mostly to the copying of Italian models by the Pergamon potters, though influence in the other direction ... cannot be ruled out' (p. 50). African Red Slip ware, which dominated the Mediterranean export market in the 3<sup>rd</sup> and 4<sup>th</sup> centuries, and continued to be widespread into the 6<sup>th</sup> and 7<sup>th</sup> centuries, strongly influenced the form and appearance of Phocian wares and countless regional 'imitations' – though there is little discussion here of the latter.

Those discursive passages in which finds and assemblages from Athens are related to other sites and regions are the more stimulating parts to read. The text occasionally strays from formal analysis and considers archaeological and historical context – the presence and absence of certain wares in destruction levels and closed contexts. There is an intriguing note on a group of six well-preserved bottles from the same house complex that date from ca 400 and have an Egyptian origin, apparently the only examples of Egyptian fine-ware from the site (p. 92). Having said this, the emphasis is firmly typological (p. 5). There is no attempt at a quantified study. Hayes acknowledges that the collection and recording practices of past years exclude an 'integrated statistical approach' (but that the Agora excavators of two generations ago used a recording system that was ahead of its time and superior to many more recent excavations – p. 2): 'total sherd counts, ware by ware, and form by form ... are not available here – this would be a monumental task, given the thousands of containers of unregistered material to be examined' (p. 2, n. 5).

The Agora finds formed much of the source material used by Hayes in his book *Late Roman Pottery* (1972, with 1980 supplement), which remains the standard work of reference on 3<sup>rd</sup>- to 7<sup>th</sup>-century fine-ware in the eastern Mediterranean. Hayes suggests that parts of this volume may be seen as a second supplement to *Late Roman Pottery*, in light of subsequent excavations and research (p. 6). The Early Roman sigillata typology is also a supplement of sorts; more accessible than Hayes' previous publications in the rather obscure and Italian-language *Atlante* series. The quantity of pub-

lished material from Mediterranean sites (Marseille, Carthage, Sabratha, Benghazi, Ephesus, Paphos, Beirut and Tel Anafa are named as especially significant) is estimated to have increased tenfold over the last quarter century (p. 6). This allows for more precise dating of particular wares and variants, as well as closer study of contexts in Athens. Nevertheless, in general Hayes stays close to the classifications that he set out thirty years ago. The task for Hayes is to seek definite date ranges and production sites for recurring classes. Consequently there is perhaps an unwillingness to accept multiple production centres, for instance in the cases of Cypriot Red Slip ware/Late Roman D and Late Roman unguentaria. However, this volume should be judged on its own merits, as a typology whose main purpose is to convey detailed information on the physical properties and chronology of certain ceramic types. In this respect - with its detailed descriptions of fabric, shape and decoration, its consistent reference to context (including a gazetteer of find deposits), its numerous illustrations (there are profile drawings of more than a thousand vessels), and its engaging discussion - it is faultless.

W. Anderson

GEORG ZLUWA, *Unterschiedliche und gleiche Hautfarbe bei Mann und Frau in der frühchristlichen Kunst*. Frankfurt am Main: Peter Lang GmbH. Internationaler Verlag der Wissenschaften, 2010. 187 S., 30 Farbabbildungen; 21 cm. – ISBN 978-3-631-60294-2.

Mit diesem Buch nimmt sich der Autor einem Forschungsdesiderat an, dessen intensive Untersuchung lange auf sich warten ließ. Es handelt sich um eine leicht überarbeitete Version der Dissertation Georg Zluwas am Institut für Klassische Archäologie der Universität Wien, die 2009 angenommen wurde. Vor einiger Zeit entführte uns Zluwa bereits auf einen bunten Streifzug durch die antike Kunst, als er im Rahmen seiner Diplomarbeit die hypothetische Farbgebung einer Sarkophagplatte aus dem Museo Pio Cristiano (Rom) erarbeitete (Hypothetische Farbgebung der Szene 'Anbetung durch die Weisen' auf der Sarkophagplatte Inv. 31 569 (ex 212), Rom/Museo Pio Cristiano, *Mitteilungen zur christlichen Archäologie* 14, 2008, 9-26.). Zluwa untersucht nun circa 250 Denkmäler einer profunden Analyse. In insgesamt fünf Großkapiteln geht der Autor der unterschiedlichen bzw. gleichen Farbgebung der weiblichen und männlichen Hautfarbe nach. Hierzu legt er in der Einleitung die Methodik seiner Erforschung dar und führt mehrere Faktoren an, die sich wesentlich auf die Entwicklung zur Farbgebung auswirkten. Als wohl wichtigstes Kriterium ist der Abstraktionsgrad zu nennen, dessen verstärktes Auftreten die gleiche Hautfarbe bei Männern und Frauen begünstigte. Dieser äußert sich durch natürliche bzw. verkürzte Körperproportionen, Modellierung bzw. flächige Darstellung von Subjekten und Objekten, Vorkommen bzw. Fehlen von Licht- und Schatteneffekten, sowie der Existenz bzw. der Absenz von Details wie Augen, Nase, Mund, Fingern und Konturlinien (S. 12). Weitere beeinflussende

Faktoren sind der Zeitfaktor, mit dessen Fortschreiten sich der Unterschied der geschlechtsspezifischen Körperfarbe reduziert, sowie der Themenbereich. So konnte Zluwa aufzeigen, dass in mythologischen Illustrationen auf die farbliche Unterscheidung zwischen Männern und Frauen deutlich mehr Wert gelegt wurde als in Alltagsszenen, die jedoch meist auch mit einem erhöhten Abstraktionsgrad einhergingen.

Das zweite Kapitel bemüht sich mittels eines kurzen Streifzugs, das Umfeld des Untersuchungsgebietes zu berücksichtigen, auf dessen Basis aufgebaut werden möchte. Die Kürze der Besprechung ägyptischer, griechischer und etruskischer Beispiele verhindert freilich weitere Schlussfolgerungen zu ziehen, doch legt diese Einführung in die Materie wesentliche Forschungslücken offen, die Kollegen zu zukünftigen Fragestellungen motivieren sollten. Die Auswahl des Bearbeitungszeitraums 'Spätantike' (S. 13) sowie der weitgehende Verzicht auf die Trennung paganer und christlicher Darstellungen kommt dem Gegenstand insofern zugute, da die christliche Kunst in der Tradition der paganen stand, weshalb nur eine kollektive Betrachtung zu befriedigenden Ergebnissen führen kann. In diesem Sinne unternimmt der Autor im Kapitel III die Forschungsreise von der pompejanischen Wandmalerei bis hin zur Malerei der römischen Katakomben, bis er schließlich im vierten Großkapitel weitere Exempel aus diversen Kunstgattungen anführt. Begrüßenswert ist zweifellos die Betrachtung diverser Kunstgattungen wie Malerei, Mosaik, Buchmalerei und Textilien, wobei erfreulicherweise auch Kunstwerke von Herkunft außerhalb des archäologischen 'Mainstreams' Behandlung erfahren, wie beispielsweise aus den heutigen Ländern Serbien, Bulgarien und Georgien (S. 88, 94-96). Die Unterteilung der Themenbereiche III und IV erscheint mir persönlich allerdings nicht ganz nachvollziehbar. Zluwa begründet das Herausgreifen des vierten Abschnitts 'Weitere Beispiele vom 4. bis zum beginnenden 7. Jahrhundert n.Chr.' mit der Feststellung, dass ab dem 4. Jahrhundert n.Chr. lokale Traditionen Malerei und Mosaik beeinflussten, weshalb er in diesem gesonderten Abschnitt eine Unterteilung nach Ländern vornimmt (S. 82). Meines Erachtens trifft dies zeitlich unabhängig zu, doch stammten seine Untersuchungsobjekte des Kapitels III ausschließlich aus Rom, Ostia, Stabiae, Boscoreale, Herculaneum und Pompeji. In diesem Sinne erscheint mir eine derartige Separation wenig gerechtfertigt, und es wäre möglicherweise einer regionalen Gliederung prinzipiell der Vorzug zu geben gewesen.

Die Bemühung, für die zu besprechende Hypothese zur Farbgebung in der frühchristlichen Kunst eine möglichst gute Grundlage der frühen römischen Malerei zu bieten, kann aufgrund des zu umfangreichen Themenkomplexes und der Fülle an diesbezüglichen Beispielen, vor allem aus Pompeji, natürlicherweise lediglich einen Überblick anhand ausgewählter Malereien bedeuten. Wünschenswert wären einige spätantike Beispiele aus Österreich und insgesamt mehr aus den Nord- und Ostprovinzen gewesen, deren Untersuchung nun zukünftigen Generationen obliegt (z.B. Enns: E. Walde, Bemerkungen zum Deckenfresco im Museum Lauricum von Enns, in *Altmodische Archäologie. Festschrift für Friedrich Brein*, 2000 (<http://farch.net>); Loig: W. Jobst, *Römische Mosaiken in Salzburg*, Wien 1982, 121-123 Taf.

54.2, 55.2; Mainz und Echzell: R. Goggräfe, *Die römischen Wand- und Deckenmalereien im nördlichen Obergermanien*, Neustadt an der Weinstraße 1999, 122 Abb. 86-88; 128 Abb. 95. 96; Sirmium: I. Popović, *Figuralno zidno slikarstvo Sirmijuma*. Nastavak pompejanskog ili nastanak pannonskog stila fresko dekoracije. *Figural Wall Painting in Sirmium*. Continuation of Pompeian or Genesis of Pannonian Style of Fresco Decoration (*Arheološki Institut Beograd. Grada – Archaeological Institute Belgrade Materials* 9), Belgrad 2008, 26-33 Kat. Ib.7-17; mehrere Beispiele in Zeugma: A. Barbet (Hg.), *Zeugma II. Peintures murales romaines* (Varia Anatolica 17), Paris 2005; R. Ergeç (Hg.), *Belkis/Zeugma and its Mosaics*, Istanbul 2007). Hierzu ist relativierend zu ergänzen, dass gerade die provinzialrömische Malereiforschung nun erst sukzessive umfassendere Standardwerke zu verzeichnen weiß, die derartige Analysen überhaupt erst ermöglichen werden. Unabhängig dieser leicht kritischen Bemerkungen ist dem Autor in vollem Maße beizupflichten, dass die dunkle Hautfarbe mit männlichen Eigenschaften verknüpft wurde (S. 145, 153), wie er anhand der Auswertung literarischer Quellen zur Diskussion stellt. Ebenso stimmig ist seine Folgerung, dass eine Unterscheidung in der geschlechtsspezifischen Hautfarbe nur dort zum Tragen kommt, wo die Eigenschaften der Protagonisten verdeutlicht werden sollten. Neben dem Abstraktionsgrad und der eingeschränkten Farbskala, die in der römischen Katakombenmalerei vorherrschten, wäre des Weiteren zu prüfen, ob möglicherweise die Entwicklung hin zu einer Gleichstellung von Männern und Frauen, die in der Spätantike aufkam, gefördert durch das erstarkende Christentum, ebenfalls als auswirkender Faktor zu berücksichtigen wäre.

Was dem Buch leider äußerst abträglich ist, ist das offensichtliche Fehlen eines Lektorats, das Formalfehler hätte beseitigen können. So wird an mehreren Stellen auf Abbildungen verwiesen, die aus dem ursprünglichen Dissertations-Manuskript entfernt wurden. Die massive Reduktion des Bildmaterials aus finanziellen Gründen thematisiert Zluwa in der 'Anmerkung zur Buchversion' (S. 5). Dieses Unterfangen ist äußerst bedauerlich, leidet die Kernaussage doch stark unter dem Umstand, dass man sich die genannten Beispiele aus der zitierten Sekundärliteratur mühsam zusammentragen muss.

Konkludierend ist zu bemerken, dass dieses vielseitige und informative Buch einem anspruchsvollen Projekt Rechnung trägt, dass hoffentlich am Anfang weiterer Forschungen unter Betrachtungen dieser von Zluwa erarbeiteten Aspekte steht. Sowohl für Wissenschaftler als auch für interessierte Fachfremde liefert der Autor interessante Einblicke in bisher ungefragt übernommene Thesen. Mehrere Tabellen und ein sauber gestaltetes Literaturverzeichnis, inklusive der Angabe der Primärquellen und deren Übersetzungen, runden diese Publikation ab und ermöglichen somit ein vertiefendes Studium, für das Georg Zluwa auch den Anstoß geben wollte (S. 5).

Claudia-Maria Behling

CHRISTA LANDWEHR, *Die römischen Skulpturen von Caesarea Mauretaniae IV; Porträtplastik. Fragmente von Porträt- oder Idealplastik, Aufnahmen von Florian Kleinfenn*. Mit Beiträgen von Annetta

Alexandridis, Stephanie Dimas, Walter Trillmich. Mainz am Rhein: Verlag Philipp von Zabern, 2008. XX + 165 S., 32 Abb., 114 Taf., 11 Beilagen; 32 cm. – ISBN 978-3-8053-3940-7.

Hiermit liegt nun der vierte Band des Kataloges vor, der die Skulpturen der an Plastik so reichen algerischen Küstenstadt Iol - Caesarea - Cherchel umfasst. Gewidmet ist das Buch den Bildnissen und denjenigen Fragmenten, deren Zugehörigkeit zur Porträt- oder Idealplastik nicht zu klären ist. Auf ein Inhaltsverzeichnis (VII-XII), ein Vorwort des Projektbetreuers W. Trillmich (XIII-XIV), ein Abkürzungsverzeichnis (XVIII) und Vorbemerkungen der Autorin (XIX-XX) folgen der eigentliche Katalogteil (1-153) sowie Nachträge zu sechs bereits zuvor publizierten Monumenten der Idealplastik (153-154). Wegen ihres bescheidenen Wertes wurden zahlreiche Bruchstücke des Museumsmagazins nicht in den eigentlichen Katalog aufgenommen, sondern lediglich in einem Anhang aufgelistet (155), an den sich Abbildungsnachweise (157-158) und Konkordanzen (159-165) anschließen. Bedauerlicherweise fehlen ein Museumsregister sowie Namens- und Sachindices - aber vielleicht sind sie für den ausstehenden fünften Band geplant? Den Abschluss des vorliegenden Buches bilden in Ergänzung zu 32 Abbildungen innerhalb des Textteiles 114 Tafeln exzellenter Qualität und elf Beilagen. Ungefähr zwei Drittel der Monumente waren bisher unpubliziert.

Der Katalog (Nr. 275-406) gliedert sich in Porträts (I) der Mitglieder der Königsfamilie [25 v.-40 n.Chr.: Iuba II., Kleopatra Selene, Ptolemaios und Drusilla (?)] sowie in Bildnisse von Angehörigen des römischen Kaiserhauses [Livia, Drusus Maior, Livilla (?), Antinous, Claudius Albinus oder Septimius Severus, Lucius Verus (?)] und Privatpersonen, aufgeführt in chronologischer Ordnung. Es schließen sich Porträtstatuen sowie Porträtbüsten, jeweils ohne Kopf, an, gefolgt von Fragmenten (II), bei denen nicht zu entscheiden ist, ob sie der Bildnis- oder der Idealplastik zuzurechnen sind. Die Katalogtexte richten sich nach den bewährten Mustern der vorhergehenden Bände und liefern neben einer ausführlichen Beschreibung unter Berücksichtigung sämtlicher Beschädigungen sowie antiker und moderner Ergänzungen alle nur möglichen Informationen wie Fund- und Aufbewahrungsort, Inventarnummer, Maßangaben, Literaturhinweise und - wo möglich - einen begründeten Datierungsvorschlag. Besprochen werden nicht nur Monumente im Museum von Cherchel, sondern auch solche mit der Herkunftsangabe 'Caesarea' in Algier, New York, Paris und Tunis sowie Stücke, die sich in Privatsammlungen befinden oder heute verschollen sind.

Da das bisher allgemein als Iuba I. angesehene Bildnis im Louvre von L. als Götterkopf angesehen wird, fehlt es folgerichtig im vorliegenden Porträtkatalog (König Iuba I. oder Deus Maurus?, *JdI* 116, 2001, 277-297; *Die römischen Skulpturen von Caesarea Mauretaniae* III, Mainz 2006, 85-87 Nr. 256 Taf. 68). Somit eröffnen die Porträts seines Sohnes den Katalogteil. Sieben Bildnisse Iubas II., darunter eine Statue im Typ des Diomedes, wurden in Cherchel gefunden (Nr. 79. 275-80), vier weitere weisen andere Provenienzanangaben auf. Zu



Recht werden die letztgenannten - allerdings ohne entsprechende Nummerierung - in den Katalog aufgenommen und photographisch dokumentiert, da sie für die Erstellung einer chronologischen Entwicklung unbedingt notwendig sind. Gleiches gilt für die Bildnisse des Mitregenten und späteren Nachfolgers Ptolemaios, von denen ebenfalls sieben Exemplare in der Residenzstadt zutage gekommen sind (Nr. 282-288), sechs weitere, darunter eine nackte Porträtstatue mit Schulterbausch, stammen von anderen Fundorten. In einem ausführlichen Aufsatz (Les portraits de Juba II, roi de Maurétanie, et de Ptolémée, son fils et successeur, RA 2007, 65-110 Abb. 1-56) hatte L. eine Abfolge der Porträts beider Regenten vorgeschlagen, welche auf den Altersmerkmalen der Dargestellten basiert. Muss bei dem erwachsenen König Juba II. ein Kopf mit jünger wirkenden Gesichtszügen nicht a priori in dem entsprechenden Alter gefertigt sein - auch später kann ein älterer Typ jüngerem Aussehens gewählt worden sein - so ergibt ein solcher Rückgriff bei den kindlichen bzw. jugendlichen Porträts des Ptolemaios in der Tat keinen Sinn. Allerdings spielen bei der Altersbestimmung gelegentlich subjektive Eindrücke eine bestimmende Rolle. So kann der Rez. nicht nachvollziehen, dass der berühmte Bronzekopf aus Rabat Juba II. in einem Alter von mehr als 50 Jahren darstellen soll (9-10, 15). Die Autorin argumentierte bei der Erstellung ihrer Entwicklungsreihe, die im vorliegenden Band übernommen ist, gegen die von K. Fittschen (Die Bildnisse der mauretanischen Könige und ihre stadtrömischen Vorbilder, MM 15, 1974, 156-173 Taf. 15-31) aufgestellte Abfolge der Bildnisse, die sich an der Übernahme bestimmter Frisurmotive von Angehörigen des julisch-claudischen Kaiserhauses orientierte, ohne dass dabei allerdings immer auf die Alterszüge der nordafrikanischen Könige Rücksicht genommen worden wäre. In dieser kontroversen Diskussion scheint das letzte Wort noch nicht gesprochen zu sein.

Zu einigen Katalognummern seien ergänzende Bemerkungen erlaubt.

Nr. 294: Dieser Frauenkopf wurde sekundär aus einem Kaiserbildnis gearbeitet, ein außergewöhnlicher Fall, da er von der Regel abweicht, dass aus einem Kaiserporträt nur wieder ein solches entstehen kann. L. entscheidet sich für Augustus und gegen Caligula, doch können die historischen Argumente nicht überzeugen. Nr. 298: Bei diesem Porträt *capite velato* steht die Frage nach dem Geschlecht der dargestellten Person im Zentrum der Diskussion. Da die Anordnung der Stirnhaare keine eindeutige Entscheidung zulässt, wurde der Kopf - nicht zuletzt wegen seiner Bohrlöcher an den Ohrläppchen, die nur für Ohringe einen Sinn ergeben - meist als weiblich angesehen. Doch offensichtlich konnten sich auch nordafrikanische Männer, vor allem Priester, in gleicher Weise mit Ohringen schmücken. Außer dem sprechen die deutlichen Koteletten eher für ein männliches Bildnis.

Nr. 314: Bemerkenswert ist das Bildnis eines bärtigen Mannes frühseverischer Zeit, da er augenscheinlich mit einem erblindeten Auge dargestellt ist; L. kann immerhin vier Parallelen mit Wiedergabe dieses körperlichen Gebrechens benennen und abbilden (Beilage 10 a-d). Nr. 320: Diese gut erhaltene Statue eines Kybele-Priesters wird von L. in das ausgehende 4. oder beginnende 5.

Jahrhundert datiert. Aus historischen Gründen dürfte jedoch nach der Erhebung des Christentums zur Staatsreligion durch Theodosius d.Gr. nicht mehr mit einer derartigen Darstellung zu rechnen sein. Zuletzt wurde ein Ansatz in der ersten Hälfte des 4. Jahrhunderts vorgeschlagen (J.-Ch. Balty, RA 2010, 430).

Nr. 321: Die allseits bekannte kopflose Panzerstatue aus Cherchel wird mittels Stilkritik nachvollziehbar in die claudische Zeit datiert. Darauf aufbauend deutet W. Trillmich in seinem Beitrag die Panzerreliefs nicht mehr, wie bisher, als Hinweise auf den Sieg bei Actium - was eine Identifizierung mit Octavian/Augustus zur Folge haben müsste -, sondern sieht in ihnen Anspielungen auf die Eroberung Britanniens durch Kaiser Claudius. So führt die Datierung direkt zur Identifizierung des Dargestellten, eine methodisch bedenkliche Vorgehensweise, würden doch die weiterhin als Venus und Divus Iulius interpretierten Figuren viel besser zum ersten Kaiser passen. Bei gleicher Datierung und Benennung wird von C. Maderna allerdings an der Deutung der Panzerreliefs auf die Schlacht bei Actium festgehalten (in: P.C. Bol (ed.), *Die Geschichte der antiken Bildhauerkunst* IV, Mainz 2010, 77, 313, Abb. 138).

Nr. 401/402: Für die Kaiserzeit belegen Halbfabrikate einer Herme und einer Büste eindeutig die ohnedies zu erwartende Existenz mindestens eines Bildhauers in der Stadt.

Nr. 405: Mit Photos, aber ohne Beschreibung und wissenschaftliche Diskussion - beides wurde der Autorin unterzogen - wird eine neue Replik des sog. Pseudo-Seneca bekannt gemacht. Ob der vor 30 Jahren amtierende Direktor der ihm vorbehaltenen Publikationspflicht nachkommen wird, darf füglich bezweifelt werden.

Wer Vorwort und Vorbemerkung aufmerksam gelesen hat, versteht, welche mannigfaltigen Schwierigkeiten seit dem Projektbeginn im Jahre 1982 gemeistert werden mussten. Umso dankbarer darf man der Verfasserin und ihrem Team sein, dass man es trotz mancher Rückschläge nie an Mut und Ausdauer hat mangeln lassen. Das Ergebnis ist beeindruckend. Es bleibt zu hoffen, dass die Autorin als beste Kennerin des Materials noch die Zeit und die Kraft finden möge, den angekündigten fünften Band mit der Zusammenfassung über die Entwicklung der Plastik dieser römischen Metropole Nordafrikas in angemessener Zeit vorzulegen.

Michael Donderer

G. CAMPOREALE/G. FIRPO (eds), *Arezzo nell'antichità* (Accademia Petrarca di Lettere Arti e Scienze, Arezzo). Rome: G. Bretschneider Editore, 2009. VII+293 pp., figs, 28 colour plates, 29.5 cm. - ISBN 978-88-7689-244-8.

Until 2009 there was no good monograph on Arezzo in the prehistoric, Etruscan and Roman period, a prosperous city famous for its bronze statues (L'Aratore, Chimaera, Minerva), ceramic industry and grain production. This gap is now filled by a well edited book, a precious collection of highly specialist but usually readable papers all written in Italian by thirty different experts who cast light upon the history of the discoveries in and research on ancient Arezzo, from Antiquity until ca 1900, the geological history, the prehistory, the

still unknown Etruscan name of Arezzo, the city and its artistic production in the Etruscan period, the cultural influence of Chiusi on Arezzo, the famous bronze Chimaera, the local black-gloss ceramics, inscriptions and bronze coins showing a wheel, possibly minted at Arezzo (pp. 143-149), a Marsian inscription referring to *Il Casentino* (ca 300 BC), Arretium and its history, institutions, families, *elogia Arretina*, and artifacts in the Roman period, the road system in the region, the *arretina vasa*, the exciting personality of a very old Etruscan aristocratic family, Caius Cilnius Maecenas, literary patron and friend of Augustus, and the Christian origins of the city and territory. A separate, rather concise section unfortunately without maps, deals with recent excavations in the province of Arezzo (Valdarno superiore, Castiglion Fiorentino, Valtiberina, Il Casentino and east Valdichiana). Finally, the history of local National Archaeological Museum 'Mecenatè' is described. The bibliographies are abundant and almost up to date. The indices make consultations easy. The best detailed city map (from 1992) can be found on p. 167. A good archaeological map of the region is missing. Those interested should consult M. Torelli et al. (eds), *Atlante dei siti archeologici della Toscana*, Rome 1992.

It is impossible to comment on each paper. Certainly, the book offers several new insights. A. Cherici makes clear that city came into being rather late, around 550 BC.; he dates the city wall to the 4<sup>th</sup> century BC, possibly as a defense against the Romans. Quite intriguing is A. Maggiani's essay on the famous bronze Chimaera. He dates it on epigraphic grounds around 400 BC and not much later. The bronze would contain lead from the Laurion mines, possibly taken by a Attic bronze worker to Arezzo. On the other hand M. suggests that the bronze was made by a Greek from South Italy (p. 119). Since the inscription *tinšvil* is Etruscan, other options are possible, e.g. an Etruscan bronze worker who learned the job in a Greek city. Anyhow, the bronze monster now really deserves a monograph. J.-P. Morel convincingly argues that the famous Roman Arretine red-gloss ceramic (after ca 30 BC) was the successor of the local Etruscan black-gloss one, which started in the 4<sup>th</sup> century BC. Some workshop owners were of Armenian origin (Bargathes and Tigranus). S. Bruni's detailed comment on the Etruscan artistic production of Arezzo is excellent. The early bronzes suggest that there were already sacred spots (votive deposits) in the region in the 7<sup>th</sup> century. The book also contains surprising antiquarian details. The famous Etruscan mirror (surnamed the *Patera Cospiana*) showing the Birth of Minerva from Tina's head (now in Bologna) appears to have been used as a cover of a ceramic or bronze cinerary urn, which is exceptional (p. 110).

The book covers most but not all aspects of Arezzo in Antiquity. There are several overlaps and inconsistencies, probably because the authors did not read each others' contributions. Special chapters should have been dedicated to the Arezzo region (places like Pieve a Socrana), and to the material aspects of Etruscan religion. The exceptional, impressive sanctuary with a temple and a small theatre, not to be interpreted as a temple-theatre, on a high hill at Castelsecco, 3 km to the south-east of the city, dated to ca 150 BC, is mentioned many times but without an evaluation. The theatre is one of

the few material indications that Etruscan theatre plays were performed before the Romanization of Arezzo (see G. Colonna, in *Spectacles sportifs*, Rome 1993, 343, with bibl.). One of the *in situ* inscriptions reading *tinšlut* is correctly translated as 'seat/field of Tin (Jupiter)' on p. 77 and 140, but incorrectly as 'Jupiter Libertas' on p. 160. From the touristic and cultural heritage views the suburban sacred site should be better indicated and protected. Unfortunately the material indications of the exciting very long struggle between Christians and pagans has not been treated (see e.g. p. 243 on San Bernardino's destruction of the suburban Etruscan water cult at Pitigliano in 1428 (not in 1444 as mentioned on p. 157)). The epigraphic contributions are not completely up to date. For example, *fartan* is not an unknown deity (p. 140), but a Genius, a procreating god, as G. Colonna has proven long ago (*StEtr* 48, 1980, 161-179). This important generating god is mentioned among others as *farθan* in the *Liber linteus zagrabiensis*.

In conclusion, apart from some shortcomings the book will stimulate further research in and on Arezzo and its region.

L. Bouke van der Meer

MATTHIAS HAAKE/MICHAEL JUNG (eds), *Griechische Heiligtümer als Erinnerungsorte. Von der Archais bis in den Hellenismus*. Stuttgart: Franksche Verlag, 2011. 163 pp., 10 figs, 21 cm, – ISBN 978-3-515-09875-5.

This book focuses on Greek sanctuaries as places of memory. It contains eight well written, thought provoking papers of a colloquium that took place at the Westfälische Wilhelms-Universität Münster on 20 and 21 January 2006. In the introduction Michael Jung deals with methodical aspects. In his opinion the studies of Pierre Nora and Maurice Halbwachs are useful for the study of memory in ancient society, e.g. monuments, votive gifts, *stelai*, cults, texts. One of the main questions was why sanctuaries were memorial focus points, even of stories that never took place. Anne Jacquemin states that the sanctuary of Delphi as *lieu de mémoire* was mainly created by elite visitors and writers in the imperial period. How it functioned as such in the archaic and classical time would be unknown. Kai Trampedach comments upon divine signs, in fact damages of monuments, at Delphi too, between 415 and 371 BC. The stories were probably invented by local priests *post eventus* in order to present Delphi as a pan-Hellenic memorial place. Elizabeth R. Gebhard deals with 'Poseidon on the Isthmus, between Macedonia and Rome (198-196 BC)'. She suggests that the destruction of objects recalling victories over Persia and Macedonian hegemony formed the background of Titus Quinctius Flamininus's proclamation of freedom in 196 BC. K. Freitag analyzes Olympia as place of memory in the Hellenistic period. He concludes that contemporary writers from Elis like Agaklytos and Hippias wanted to underline Olympia's pan-Hellenic character, its continuity and reign over adjacent Peloponnesian territories. M. Jung sheds light upon the tombs of two warriors against the Persians, Pausanias and Leonidas, in the sanctuary of Athena Chalkioios at Sparta mentioned by Pausanias

(3.14.1). Annual speeches and an *agon*, for Spartans only, took place there. Jung concludes that originally, just after 461 BC, this was done as an act of expiation but later on, especially during the Peloponnesian Wars, as anti-Athenian propaganda (for hero cult see also A. Barzani et al., *Modelli eroici dall'antichità alla cultura europea*. Roma 2003). Both tombs had to illustrate the important Spartan contribution to the victory over the Persians. M. Haake deals with the semantics of divine honour for the Hellenistic king Antigonos II Gonatas as victor of the Celts on an Athenian memorial place in the Nemesis temple in Rhamnous. The sacrifices in his honour ceased when Athens liberated itself from the Macedonian supremacy in 230/229 BC. R. Gagné analyzes the epigram of Salmacis from the temple of Hermes and Aphrodite at Bodrum, from the 1<sup>st</sup> century BC, as a map of memories. In the poem Aphrodite tells first about her founding of, then about the generating force of the city of Halikarnassos.

From the essays may be deduced that memory places fostered group identity. Memory, however, was not static; it could be (re)invented and transformed when the political situation changed. Apart from the original text and translation of Pausanias's text (1.32.2-3) about Phidias making a statue of Nemesis at Rhamnous from a marble block that was first carried away (or supposed to be) by Persians in 490 BC to erect their own monument of victory, both on pp. 9-10 and on p. 112, there are few overlaps. The separate, often long bibliographies are up to date. Though the loosely connected essays are mainly local, historical and epigraphic, they might interest classical archaeologists.

L. Bouke van der Meer

LARISSA BONFANTE (ed.), *The Barbarians of Ancient Europe. Realities and interactions*. New York: Cambridge University Press 2011. 395 pp., ill., 13 color plates, 15 maps, 26 cm. ISBN 978-0-251-19404-4 (hardback).

This well illustrated, stimulating volume has its origins in a conference on some barbarian peoples of ancient Europe 'who had contact with Greek culture during its flowering,' held at Virginia in 2003. It contains an introduction written by L. Bonfante (hereafter LB), and up to date chapters written by experts: on the western barbarians in Greek geography (P.T. Keyser), the funeral of Scythian kings (A.I. Ivantchik), the mobility, tomb architecture and early urban structures of the Scythians (R. Rolle), images of Thracian myths (I. Marazov), the concept of (so-called) Celts (B. Cunliffe), the Germans (P.S. Wells), the Etruscans (LB), *situla* art (O.-H. Frey), a possible barbarian myth about a talking head (N. Thomson de Grummond), Romans and/as barbarians (J. Marincola), the Goths (W. Stevenson), and some final thoughts by B. Cunliffe. Then follow a note on Delacroix's painting of Ovid among the Scythians by A.E. Farkas and an index. For a summary of the essays see the online review of D. Dzino (Bryn Mawr Classical Review 2011.09.34) and D. Roller, *The Ancient History Bulletin Online Reviews*, vol. 1 (2011) 38-39.

LB notes that the Greek concept of *barbaroi* came into being only after the Persian war (cf. Thucydides 1.3.3);

she highlights identities and names of peoples, the role of women (e.g. Amazons), and features of barbarian customs and rituals, such as human sacrifice. Questions to be considered were according to LB the relationship between ancient written sources about non-Greek peoples, their material culture and their *modus vivendi*. What did the different non-Greek cultures have in common and how can one deal with chronological questions and historical change? Some authors give partial answers to these questions.

Ivantchik proves that Herodotus' description of the funeral of Scythians kings is largely compatible with archaeological data from burial mounds of the 7<sup>th</sup>-5<sup>th</sup> centuries BC (see the handsome table on p. 80). Because there is no *interpretatio graeca* in the description, Herodotus was probably informed by a Hellenized Scythian who even knew the tradition of traditions from far before his time.

Marazov makes it clear that Thracian art was influenced by Iranian and Greek art, although the way of transmission is not always clear. He presumes, for example, that Didykaimos, the Thracian owner of a silver *phiale* from Rogozen showing Heracles pulling Auge towards him (both Heracles and Auge are identified by Greek inscriptions), could not have understood the scene; but because Auge is *monosandalos*, in the owner's eyes the scene would show 'a moment of transition, Auge no longer being a maiden, not yet a wife either.' In this case Marazov does not quote any source for a similar Thracian rite of passage. In addition, the scene evidently shows the moment *before* Auge lost her virginity. So the question is how this probably Athenian *phiale* came into Didykaimos' hands. If he had direct contact with the maker, he may have been informed about the meaning of the scene. In addition, Heracles is called *dèladè* ('of course [this is Heracles]'), which may hint at the artist's explanation of the scene.

Cunliffe shows that from the sixth to the first centuries BC classical authors located the Celts in western Europe (and the Scythians in the north, the Indians the east, and the Ethiopians in the south (see p. 41 map 2.2). Before the sixth century, 'Celtic' languages may have been spoken first in Atlantic Europe. Around 540 BC elite centers of the Celtiberians and of the Hallstatt chiefdoms developed. Around 480 BC at least four centers of the La Tène culture become visible in central western Europe. The latter received among others symposium equipments from the Etruscan world. Amber from the north arrived via two centers in Italy (for a different view see J. Collis, in *Kelten am Rhein*, 2010, 33-47).

Wells points out that the distinction Caesar made between the Gauls west of the Rhine and the Germans east of it cannot be proved by archaeological data. In *barbaricum*, Denmark and north Germany, many Roman artifacts dated to ca 58 BC and AD 50 were found which may have been imported by soldiers who served in the Roman army. In later periods even cattle from those areas may have been sold to the Romans (like the famous cow from Frisia).

LB considers both Herodotus' information about the Lydian origin of the Etruscans and Dionysius of Halicarnassus' statement that they were autochthonous to be biased. Interesting are her observations about possible Etruscan influence on among others the German,



*situla*-, Halstatt- and Thracian cultures. The latter seems doubtful to me because Thracian mirrors (see fig. 8.16) differ from Etruscan ones. Whether the Hirschlanden Warrior (VI BC) was influenced by Etruscan models is also questionable because the adduced *comparandum*, the Italic Capestrano Warrior (ca 550 BC), does not originate from Etruria but from Picenum.

Frey shows that the makers of the *situla* and Este artifacts were influenced by Etruscan art and that they transmitted elements to the Celtic art of the 5<sup>th</sup> century BC.

De Grummond distinguishes several types of (presumed) talking heads (Silenus, Tages, Urphe (Opheus), Medusa), mostly on Etruscan mirrors, and suggests that beheaded heads in Thracian, Scythian and Celtic art may have had a similar oracular or prophetic function.

Marincola explains that the view of Greeks on Romans (cf. Horace, *Epist.* 1.156-7: *Graecia capta ferum victorem cepit...*), and vice versa, constantly changed.

Stevenson shows that Goths were less barbaric than presumed. They not only produced wine but also translated the Bible into Gothic.

Cunliffe concludes that European barbarians should not be studied without paying attention to influences from the Mediterranean region and vice versa, and advocates further interdisciplinary research for a better understanding of the networks involved.

L.B. van der Meer

ELISABETTA GOVI/GIUSEPPE SASSATELLI (eds), *Marzabotto. La casa 1 della regio IV ~ Insula 2*. Vol. 1 *Lo scavo*; Vol. 2 *I materiali* (Studi e Scavi, nuova serie 26, Kainua 2). Bologna: Ante Quem, 2010. 329+513 pp, 445+373 ill. and 8+7 colour pls, 2 separate maps, 29.5 cm. ISBN 978-88-7849-057-4.

Volume 1 of this splendid, voluminous publication presents the extremely complicated excavation of a large, atypical, complex of aggregated buildings, called House 1 (1267 m<sup>2</sup>) of Regio IV, 2, bordered by *plateia* B (with drainage gutter) and *stenopoi* b and c at Marzabotto. Excavations were carried out between 1988 and 1998. Volume 2 analyzes the finds on and just around the spot. The 23 very readable chapters were written by thirty experts. Volume 1 deals with Bronze Age artifacts, the excavation, stratigraphic and planimetric analyses, reconstruction of building periods, construction techniques, streets, furnaces, virtual reconstructions, conclusive considerations and a conclusion in English.

The complex mentioned is located near R. IV, 1, the well known *insula* with elite houses (ca 600 m<sup>2</sup>), some of the atrium type, with shops along *plateia* A (excavated by G.A. Mansuelli) and not far from the recently excavated, urban temple of Tin(ia), R. I, 5. It was built at the end of the 6<sup>th</sup> and the beginning of the 5<sup>th</sup> century BC. Some Attic black figure cups (used in symposia), however, date from 550-520 BC. The complex is contemporary with the *plateiai* and *stenopoi*, house Regio V, 3, excavated by the École Française de Rome, R. V, 5, the kiln in R. II, 1 and the water sanctuary. At that time Marzabotto got its definite orthogonal street-pattern under Greek influence from South Italy. Even its Etruscan name, Kainua, is derived from Gr. *kainos* (new). It was preceded by earlier settlements, probably around 600 and 540 BC,

when other Etruscan settlements were founded in the Po valley. House 1 was used from ca 520 until ca 350 BC when the Celts conquered the city. It was first primarily residential but it had kilns for the production of ceramics. When it was modified, the early artifacts were buried in more or less closed cavities. Much material, however, was mixed up with later objects, so that the site hardly had a stratification. The complex became highly 'industrial' during four successive transformations as can be deduced by other furnaces, after ca 450 BC. Originally two autonomous buildings flanked an open entrance courtyard with water canals leading to a continually used, deep, round well, and in the rear part there were three buildings flanking a courtyard with walls which could be closed at two sides (vol. I, p. 298-299, figs 441-442 and cover). The right frontal building, which may have had a *compluvium* and *impluvium*, had a portico along the open court. In the 'industrial' period the closed back-court became a covered workshop, perhaps also with a *compluvium* too (fig. 443). It seems that the open roof-system originated between ca 550 and 500 BC in the Etrusco-Latial world. Epigraphic evidence suggests that originally the complex was used by at least five families of elite status. Inside the complex approximately 23.031 ceramic fragments were found, mostly the remains of table ware. The number of non-ceramic objects is 2.476, excluding building materials and faunal remains.

Volume 2, the *catalogue raisonné*, lists, localizes and analyzes with the most modern analytical techniques 551 selected items: diagnostic fragments of Attic and Etruscan red figured and black-gloss ceramics, of Greek transport amphoras (from Mende, Thasos, East Greece (Samos, Miletos), Corinth and Corcyra), of local ceramics (depurated, coarse ceramics and bucchero), grey ceramics, fibulas, bronze artifacts, iron materials, terracotta textile implements, bone, glass and stone objects, construction materials (mostly tiles), inscriptions and graffiti (with their find-spots on pl. 1). The last two chapters present archaeozoological data, and archaeometric analyses of black-gloss ceramics, bucchero, grey ceramics, slags, metals, furnaces and terracotta moulds. Archaeometric research shows that probably black-gloss ware, which was initially an imitation of similar Attic one, was made *in situ*. Iron, copper and bronze implements were made on the spot. It appears that grey vases developed from and were the successors of bucchero. The frequent presence of *aes rude*, copper bars (with additions of iron), and standardized stone weights proves intensive commercial activities regulated by the local authority. The bones belonged mainly to domestic animals, pigs (in the first place), sheep, goats and cattle. Hunting did not play a role.

Most interesting is the presence of a bronze hand-mirror showing 'Lasa' made in Etruria. It was found in the upper layer of *stenopos* b, dated to ca 300-250 BC and therefore presumed to be used by a Celtic woman (vol. I, 296; II, 229-230). This is possible but mirrors showing 'Lasa' or the Dioskouroi were in use until ca 150 BC, therefore also in the period when the Po valley was in Roman hands (see G. Catani, *CSE Italia* 3,1, *Volterra*, 1995, *passim*).

Not all the find-spots (US-numbers) mentioned in the catalogue can be found on the map of pl. B. Often the

reader has to consult the very detailed descriptions, maps and photographs of all parts of House 1 and its surrounding streets in Vol. 1. The numbers of the 5 buildings and 17 sectors can be found in fig. 13 on p. 28.

The exemplary, abundantly illustrated, not expensive (!) publication casts also light upon the city itself. The *nomina gentilia* (ending on *-alu*) prove that Kainua was founded by people from Po the valley. It had commercial contacts with Fratte, Bologna, Spina, and with cities in Northern Etruria. Industrial activities inside the later, orthogonal urban site had already started between ca 550 and 500 BC.

Because of its use of modern scientific and analytical techniques this publication should be present in all archaeological libraries.

L. Bouke van der Meer

MARIA STELLA PACETTI, *Corpus Speculorum Etruscorum. Italia 6. Roma – Museo Nazionale Etrusco di Villa Giulia, Antiquarium: La collezione del Museo Kircheriano, fascicolo III*. Rome: «L'Erma» di Bretschneider, 2011, 252 pp, figs, 152 pls, 32.5 cm. – ISBN 978-88-8265-624-9.

This beautiful, impressive, thirty-second volume of the international corpus of Etruscan mirrors (CSE) consists of a short history of Museo Kircheriano, its collection of mirrors, a brief note by Lorenzo Galeotti on the restoration of the mirrors, a catalogue of 31 Etruscan and 7 Praenestine bronze mirrors, each with photographs and drawings of both sides, concordances and chronological, typological, iconographic and epigraphic indices. There are no bronze analyses. The author (hereafter MSP), who also published *CSE Italia Orvieto*, gives an excellent bibliography, description, and includes the old iconographic explanations as well as her own new *iconological* interpretations, with further parallels of scenes, composition and style, the possible production center, and the approximate date of each mirror. Several items (nos 10, 12, 13, 15, 36, 37, 38) have never, or only briefly been published or illustrated so far. Two archaic items date from ca 500 BC: No 4 shows a Silenus playing a *cithara*, accompanied by a dancing woman, and No 33, unfortunately damaged, a banquet scene with one reclining person. Dating from the 5<sup>th</sup> century are the undecorated No. 5, and No. 29, on which a maenad making music with *krotala* and a satyr holding a wineskin are ecstatically dancing together. Twelve mirrors without inscriptions showing the so-called Lasa, or Dioskouroi, or groups of three, four or five persons standing in conversation are all dated by MSP to the 3<sup>rd</sup> century BC. Only one (No 27), dated to 300-280 BC, has inscriptions on the margin above the figures reading: *aplū, menrva, turan, laran*: MSP suggests (p. 90) that the gods are combined in couples because of their relationship (*turan-laran*, Aphrodite-Ares) or function (both *aplū* and *menrva* can be oracular). Fourteen mirrors would belong to the 4<sup>th</sup>, and seven to the 4<sup>th</sup> or 3<sup>rd</sup> century, in other words around 300 BC.

There is no topographical index but some find places are known, Nos 1: Praeneste area, 5: Valentano, 7: Perugia area, 18: Blera, 23 and 31: Praeneste, 25: Perugia/Cortona area, and 32: a tomb at Orbetello.

Contexts, for example tomb associations, are unknown, so that dates are mainly based on stylistic comparisons. Most pear-shaped mirrors are assumed to have been made at Praeneste in Latium.

Most of MSP's exegeses of engraved scenes are convincing, though sometimes there are tiny details which remain unexplained. I give some examples, limiting myself to the mirrors just mentioned.

Interesting is No 1, a much discussed mirror, dated to ca 300 BC, showing a boxer labeled *poloces* (Polydeikes; Pollux) standing on a low base to the left; in the center are a relaxed woman called *losna* (< \**leuksna* [Luna]) turned towards him, holding a scepter and facing a crescent moon, and to the right *amyces* (Amykos), sitting on a high base. To the right is a pillar with an egg-shaped object. Formerly the scene was interpreted as the moment before the two men started boxing. MSP argues instead that the outcome is illustrated: the former is triumphing and the latter will die. The pillar would refer to the tomb of *amyces*. Its egg might be Orphic-Dionysian. Problematic, however, remains the presence of *losna*, for which many solutions are suggested - she would be a kind of Minerva, protecting Pollux, or she is there to protect water (Amykos' [invisible] source), or to mark the line between heaven and earth, etc.

A similar mirror (No 31, ca 300 BC) illustrates a dancing, ithyphallic *painsscos* (sic: for Paniscos: Little Pan) imitating *marsuas'* dance near a large, ivy-decorated crater on a pedestal. MSP, following Mario Torelli, holds it to represent the initiation rite of the young Pan into the *Liberalia* (p. 99). Unidentified, however, is the attribute in Marsyas' right hand: an *aspergillum*, a whip or animal's tail? Interestingly, we learn that the engraver of No 31 was a man (*Vibis Pilipus cailavit*).

Another mirror (No 7; ca 350-300 BC) shows a unique scene: a seminude woman kneeling on waves reaches up to embrace a tall, nude young man standing before her, who is crowned from behind by a hovering, winged Eros. MSP's interpretation that the scene illustrates Aphrodite's meeting with Adonis is correct, if the crown Eros is holding in his left hand is made of myrrh - not myrtle! (p. 47): according to the myth, Adonis was born from a myrrh-tree. Interestingly, the man is overlapping the waves, which suggests that he is returning from the underworld.

The tang mirror No 18. (ca 300 BC) shows *menrva* (Minerva), with Phrygian cap, sitting on a rock, facing a standing winged *lasa vecu*, dressed in short chiton and wearing boots. The latter is known from literary sources as the Nymph Begoe (Vegoia), who is known for her revelations about lightning and the sanctity of boundaries. The recent restoration, unfortunately, did not reveal what the *lasa vecu* holds in her right hand - a branch, a twig, an ear of corn, or a tiny thunderbolt. From the gestures, we cannot deduce who is instructing whom.

Discussing No 32 (ca 350-300 BC), which shows the fight between *hercle* (Herakles) and *[he]ph[ll]nt[a]* (Hippolyte) in the presence of *menerva*, MSP wonders why the succumbing Amazon would be an appropriate theme for a typical female artifact such as a mirror is. She suggests that the male donor would have identified himself with Herakles. On the other hand she admits the

possible erotic symbolism of stealing Hippolyte's girdle (p. 101). All *hercle* mirrors, round fifty, have been listed by S.J. Schwarz in *LMC V* (1990), s.v. *Herakles/Hercle*, but not evaluated in full. What is needed is a serious study of these in order to establish why *hercle* was so popular on mirrors, and for whom he was important? There are also problematic scenes on Nos 2, 19, and 22.

These remarks in no way detract from my admiration for the Herculean energy that the author has spent to prepare this CSE fascicle.

L.B. van der Meer

*Der Pfälzer Apoll. Kurfürst Carl Theodor und die Antike an Rhein und Neckar.* Ruhpolding & Mainz: Verlag Franz Philipp Rutzen, 2007 (Catalogue of an exhibition in the Winckelmann-Museum at Stendal). 231 pp., num. ills; 29.5 cm. – ISBN 978-3-938646-23-6.

This book is more than a exhibition catalogue and still deserves, despite a long delay, a brief review, since prince Carl Theodor von der Pfalz (1724-1799) was highly interested in archaeology and stimulated research in that field in an original and innovating manner. The entries describing the objects on display in the exhibition - organised and coached by Max Kunze and Reinhard Stupperich - illustrate the essays on various aspects of the prince's cultural programme in Mannheim and elsewhere in his small state. While Carl Theodor (see Chapters I and VII-VIII) stimulated theatre, music, literature, and many other sorts of cultural activities, he also encouraged the members of the Kurpfälzische Akademie der Wissenschaften founded by him in 1763 to carry out research (Chapter II). The members made long trips within and outside the Palz and investigated medieval ruins and provincial-Roman monuments. The finds were published in the *Acta* of the academy and we still can read publications on inscriptions found at Mainz and Worms which are still extant, and excavations, all illustrated by good engravings. In this period Mannheim became a 'Pfälzisches Florenz', and Apollo Palatinus (a pun on Pfalz and the Roman Palatine at the same time) was the reigning patron of all illuminated researchers and, above all, the prince himself. Antiquity served as a model, not only to be reflected upon in research, but also as a relevant example for modern times. In this respect Mannheim did not differ considerably from other courts in Europe, but despite its small size it grew out to an important spot on the illuminate map of scholarship.

Carl Theodor made two trips to Italy, in 1774-1775 and 1783, which were no traditional *Kavalierstouren*, since he was in a mature age, but they inspired him considerably to study more narrowly antiquity and early Christian history. He showed a peculiar interest in subterranean monuments like the catacombs of Rome, whereas the excavation galleries in Herculaneum made no appeal. The tourist visits sometimes tallied with inspections of modern projects like the attempt at land reclamation of the Pontine Marshes by pope Pius VI. Various objects were bought and a great gift was the 'Trunkene Alte', now in the Glyptothek at Munich', regaled by cardinal Ottoboni (p. 90).

Carl Theodor actively stimulated the execution of excavations and the restoration of the finds. The remains

of the baths of a villa between Ladendorf and Schriesheim were covered with a roof and drawings and descriptions were published in the *Acta*. This holds true for other sites as well.

The Academy members also collected objects for the Antiquarium at Mannheim during their above mentioned trips. This collection is highlighted in Chapter III. It was no longer a cabinet of curiosities as it had been under the previous princes based in Düsseldorf, but was split up into specialised collections, e.g. a natural cabinet and, important in our field, a collection of antiquities and casts of ancient sculptures in Rome. After Carl Theodor's death the objects were dispersed to various museums and collections, and the main items went to Munich. One of the main sub-collections stemmed from the antiquarian Johannes Smetius from Nijmegen and contained the coins and gems that would form the beginning of the Staatliche Münzsammlung in Munich. Other sections included Etruscan cinerary urns, 'Etruscan' (i.e. Greek) vases, bronze statuettes, inscriptions and other objects. Gypsum casts were collected for the academy of arts, various original sculptures came from Italy and Germany itself. The editors inserted a number of these objects into this catalogue and some entries are rich of new interpretations. I single out that by Ute Uebel on the already mentioned 'Trunkene Alte' which she interprets as an old female priest hallucinated by the use of atropine heated in the *lagynos* she holds in her lap, rather than as an indecent drunkard.

Chapter IV on the Kunstakademie is interesting for the study of collections of gypsum casts in the education of artists. Drawing room contained the highlights of ancient sculpture in accordance with Winckelmann's paradigm of classical arts. Other chapters are devoted to the library and the influence of ancient architecture on the buildings erected in the time of Carl Theodor. In sum, the book offers much more than the record of the exhibition in the Winckelmann-Museum at Stendal, since it presents a full study of a typical prince of German Enlightenment and his cultural politics. The work is the result of various university seminars coordinated by professor Stupperich whose students could present their contributions in the book's entries. A very rewarding form of teaching and setting up research that should be followed by other academic colleagues.

Eric M. Moormann

FRIEDRICH KRINZINGER (ed.), *Hanghaus 2 in Ephesos. Die Wohneinheiten 1 und 2. Baubefund, Ausstattung, Funde.* Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 2010. 2 text volumes, 1 volume with plates. 705 pp., figs, 497 pls; 39 cm (Forschungen in Ephesos VIII/8). – ISBN 978-3-7001-3944-7.

One of the most attractive - and at the same time most discussed - features of the Austrian excavations at Ephesos is the re-erection of various monuments like the façade of the Library of Celsus and the monumental entrance, next to it, to the forum. Archaeologists have a serious task in preserving the traces they explore and, to a certain extent, in restoring these remains as well as possible. The *anastilosis* is another matter, but



warrants the visit to the site of numerous visitors. As to the famous *Hanghäuser* - slope houses, namely on the slope of Bülbül Dağ - explored since the 1960s the conservation and restoration policy has been still more delicate, because there are several superposed floors and levels and it is no case to remove entire structures in order to find the lower strata as was once the policy in many excavations. As a result, scholars and tourists can visit these houses covered by modern roofs (interventions of a second generation of restoration works) and supported by high-tech constructions that are sometimes amazingly simple, but betray long preparatory reflections of the members of the Austrian team, archaeologists, architects and restorers alike. The last excavations have also led to a new series of impressive volumes about these houses recording the fieldwork, inventory of the preserved architectural remains and the inventory of finds. The huge books under review, only manageable on a large desk, show the results of a meticulous team work of a very skilled staff with respect to *Hanghaus 2*, in fact an entire house block or *insula* surrounded by the *Stiegengassen 1* and *3* running almost north-south on the west and east sides, the *Kuretenstrasse* on the north and the *Hanghausstrasse* on the south side. In the reviewed volumes the Rome houses 1 and 2 (*Wohneinheit* = WE 1 and 2) out of seven (see plate 1) are published. In 2005 a monograph on WE 4 was published under the direction of H. Thür (*Forschungen in Ephesos VIII/6. Hanghaus 2, Die Wohneinheit 4. Befunde, Ausstattung, Funde*, Vienna). Studies on WE 3, 5, and 6 are in preparation. *Hanghaus 1* has been the object of another recent volume in this series: C. Lang Auinger, *Forschungen in Ephesos VIII/4. Hanghaus 1 in Ephesos. Funde und Ausstattung* (see my review in *BABesch* 81, 2006, 246-248).

The template of the two volumes dedicated to WE 1 and WE 2 is identical and matches that of the WE 4 volume. After a presentation of building data in tables, the authors give an analysis of the house remains and their building history. The paintings and mosaics are briefly presented in the following sections, since the authors can rely on earlier monograph by V.M. Strocka and W. Jobst, albeit including the old timeframe now abandoned (see below). Other categories of finds, more extensively presented, include graffiti, architectural sculpture, water conducts, ceramics, coins (few; some of them lost), glass etc. as well as marble sculptures, always described with due references to the generals outline as sketched at the beginning. Sections on 'Nachgrabungen' interrupt these discussions, but are important, since they fine-tune several observations made in the other sections. As a conclusion, a brief 'Auswertung' gives the main results (WE 1, volume 1, pp. 377-383; WE 2, volume 2, pp. 688-696).

Above Hellenistic ovens and other less clearly definable traces the houses' story runs from the early 1<sup>st</sup> century AD up to the third quarter of the 3<sup>rd</sup> century (and no longer, as admitted previously, through the 6<sup>th</sup> century as advocated in the first years, for which see F. Krinzinger (ed.), *Das Hanghaus 2 von Ephesos*, Vienna 2002, reviewed in *BABesch* 79, 2004, 225-227). WE 1 was a peristyle house that maintained its main shape over the centuries but underwent numerous interventions meticulously analysed. There were rooms of different

sizes which had various functions. In Phase II a bath was installed. Obviously, most remains belong to the last phase (IV), especially the mural paintings and many of the mosaics still *in situ*. These lavish decorations show the ongoing importance and prestige of this house. No names of possible owners known from the *prosopographia ephesia* have been linked with this property by the authors.

WE 2 was a still more lavishly executed dwelling, containing two peristyles and covering a larger area. Three phases (I, II, and IV) can be distinguished, beginning with the time of Augustus. The outlay did not change very much, in contrast with decorations and furnishing of the rooms. Remains of an ivory chest were found adorned with a frieze showing Trajan among barbarians (see W. Dawid, *Forschungen in Ephesos VIII/5. Die Elfenbeinplastiken aus dem Hanghaus 2 in Ephesos, Räume SR 18 und SR 28*, Vienna 2003). Other peculiar finds are an Egyptian statuette of around 600 BC, and a marble Roman *togatus*. One of the owners would have been the *eques* C. Vibius Salutaris, recorded in a graffito found in the toilet (pp. 123, 472) and better known from a long inscription recording his will. Apparently, his heirs kept the house basically unaltered so that in WE 2 many small interventions can be observed. However, among the decorations of Phase IV glass mosaics and extensive marble veneers covering walls and floors stand out as new elements.

Every archaeologist would like to get the lavish publication form permitting him or her to insert so many illustrations. Nevertheless, this imaginary student would probably also wish (as I do) to have the smaller images immediately next to the descriptions or discussions in the text, instead of opening another huge tome. Despite the high quality of the printed works, the black-and-white photos are rather grayish, in contrast with the bright colour plates. But this detail does not prevent from admiring the huge scientific enterprise and its paper result reached by a sound team of archaeologists from the Austrian Academy of Sciences and Austrian universities, working in tight collaboration.

Eric M. Moormann

GIULIANA CALCANI, *Skopas di Paros*. Roma: Giorgio Bretschneider Editore, 2009 (*Maestri dell'arte classica* 2). 183 pp., 16 pls; 21 cm. – ISBN 978-88-7689-243-1.

After Praxiteles and Lysippos, Skopas might be the best known Greek sculptor of the 4<sup>th</sup> century BC. Apart from original works like the pediment figures from the Alea Temple at Tegea, we possess numerous Roman copies of his sculptures and can glean a lot of information from the written sources. Among them, Pliny the Elder is important for the description of monuments exposed in Rome, where Skopas' work must have been in great praise.

Calcani is aware of the problems encountered in research about a Greek artist whose work is lost for the greater part. She briefly reassumes previous scholarship and takes a positivistic position, believing that we really can get a fairly good idea of the master's work. She observes that in the run of the era of research we

seem to know less instead of more (which can be a fundamental increase of scholarship!). Her first chapter on 'Life and Work' contains fairly little on Skopas as a person, despite the remarks on the necessity of writing artists' biographies (p. XII, in the Introduction) and much more on the development of his artistic career. In sum, no more than twenty-four monuments are connected with the master who may come from Paros, for which reason Calcani suggests that he especially appreciated the fine marble from this island (see handy chronological list of these works on pp. 47-48). He worked as an architect and sculptor alike, as did other great artists in those days. There were various sculptors demanding their share of prestige and fame: Praxiteles and Leochares were his rivals, but the three of them collaborated in the adornment of the Mausoleum at Halikarnassos. Skopas' work is characteristic, in that the tormented poses (even double *contrapposto* assumed, p. XVI), the pathetic gazes and the rendering of the faces are easily recognisable (see the *summa* on pp. 45-46). Yet, we have to be prudent in ascribing too much to Skopas himself, since, thanks to his fame, his oeuvre was copied and followed during and after his own life. In that vein, the famous Meleager in the Vatican Museums and the Herakles Lansdowne in the Getty should not be connected with Skopas. We even have the complication of knowing a second Skopas, to which some attributions have been made of works that belong to the corpus of the first Skopas.

The second and largest section of the book is a *catalogue raisonné* of his oeuvre, in which the 24 items are sometimes subdivided into descriptions of copies (e.g. Pothos) or elements of larger ensembles (e.g. group of Achilles, Thetis and Poseidon in Rome). Remarkably, some seven items are only known via written sources or (probably) coin images. The other items can be subdivided into originals and Roman evocations, which is a rather favourable result in comparison to much more renowned masters like Polykleitos whose work is only known from Roman copies (cf. p. XVI: the amount of works suffices to analyse Skopas' work). The subject of copy-making and its problems is not addressed, which would be relevant in a discussion of the many copies of the Pothos.

The third section contains the ancient sources to which the previous chapters have constantly referred. Calcani gives the Greek or Latin texts as well as translations (probably of her own). Unfortunately she does not give full references to Overbeck's *Schriftquellen* from 1868 or the substantial update of this work by Marion Muller-Dufeu (*La sculpture grecque: sources littéraires et épigraphiques*, Paris 2002), so that we have to return to these anthologies to ascertain whether Calcani has new texts or only the old ones. Epigraphic sources are lacking.

Calcani is rather optimistic in accepting works found at Rome as genuine works by Skopas. Badly preserved and sometimes reworked pieces barely convey the spirit of the original. Even on a photograph, I cannot understand why a small Artemis' head in the Vatican Museums (plate IV) should be an original, especially compared with the Tegea sculptures (pls X-XV). My doubts are less big, if I read her (and others') suggestion to consider the Mars Ludovisi in Palazzo Altemps as an original (p. 26), part of the afore-mentioned group in

the Temple of Neptune on Campus Martius. Another original of that set would be a Triton in Berlin. In a former presentation in Palazzo Altemps the statue of a seated woman was connected with the 'Mars', but apparently this idea has not gained subsistence, and Calcani does not mention it. The question of the attribution of the reliefs of the Halikarnassos Mausoleum to Skopas or his colleagues is briefly treated, but no new solutions are given, a desideratum we cannot fulfil without having more data than those available. The genuine pieces from the pediments of the Alea Temple at Tegea should have got more attention and be analysed in greater detail. These pieces only transmit the master's idea, although we do not need to see them as carved by Skopas personally. The description and analysis of these and other sculptures are intermingled with observations on iconography and meaning. Interestingly, the Pothos (a representation of Longing for a distant lover) transmits ideas we see expressed in other sculptures as well: personal feelings, mainly focusing on love, like Himeros, Eros, and Kairos (Lysippos). From the 24 copies of the Pothos, Calcani discusses two examples, both stemming from a Hadrianic house on the Viminal hill and now in the Centrale Montemartini at Rome.

The illustrations are small in number and in format, not very fine, and mostly give no more than one view. This dullness also perspires from the lay-out of the booklet as a whole, that looks rather uninspired, but that is not the fault of the author. The bibliography misses many titles of studies referred to in the *catalogue raisonné* and there are various typos and errors. It is not complete (cf. that in the brief item of the - not cited - *Künsterlexikon der Antike* 2, 2004).

Eric M. Moormann

GÖTZ LAHUSEN, *Römische Bildnisse. Auftraggeber – Funktionen – Standorte*. Darmstadt: Wissenschaftliche Buchgesellschaft; Mainz: Verlag Philipp von Zabern, 2010. 240 pp., 123 figs, 28 cm. – ISBN 978-3-8053-3738-0.

In the large amount of studies on Roman portraits, this book certainly fills a gap, for it is one of the few modern monographs presenting the topic in a very broad range. Lahusen, a great expert in various aspects of the research of portraits, who unfortunately passed away before the publication of the work, discusses portraits in their societal and political contexts. Accordingly, he uses literary, epigraphical sources as well as the portraits themselves. The latter predominantly are the heads, busts and full statues of men and women (no children's portraits are discussed), but also reliefs, painted representations, coins, and gem stones. Mosaics like the one showing Virgil in Tunis are not mentioned. The use of written sources stimulates him to narrate anecdotes and strange adventures associated with portraits, and he might fall into the trap of sources' usual bias, that of representing an elitist view, but, since portraits ordinarily belong to the cultural expressions of the higher classes of society, the texts tally well. Nevertheless, as Lahusen deservedly observes, they are silent about many aspects we would like to know.

The author starts with a brief definition of a portrait,

ending with (p. 22) the representation of a recognizable 'bestimmte historische Realität', whereas 'Ähnlichkeit' remains difficult, even in our era of photography and film. He presents the - limited number of - types like *togati*, cuirassed and nude figures, and equestrian statues for men and *palliatæ* for women. The 'Idealporträt' is a phenomenon that can be combined with heroic nudity, divine attributes or specific identities. An important section presents the materials used in making portraits and their significance. Bronze probably was the preferred material, but our dossier is very scarce, which is also true for silver and gold statues. Nowadays, most portraits we know are of marble, in antiquity seen as the appropriate material for the depiction of gods and deceased 'noble' men, e.g. the *summi viri* on the Forum Augustum (p. 66). From his technical background, Lahusen provides many details on special technique like the inlay of eyes and gilding. Some of these aspects are again addressed in chapter 7, which deals with the production and copying of emperor's portraits, while chapter 8 on the costs and prices also belongs to this topic.

The book lays a strong accent on the significance and original position of portraits. Lahusen puts relevant questions: who was allowed to commission a portrait in the public space and where could portraits be erected (chapter 3)? Where were portraits standing (chapter 4)? What was their function other than representing a specific person? How were portraits functioning within the public, sacred, and private realms (chapter 5)? In all these instances, Lahusen sees a watershed between the Republican period and the Empire. It is no surprise that in Rome the emperor limited the possibilities of the senate and the social elite, not to speak of 'ordinary' people, so that the presence of the emperor and his family was dominating the public and sacred space. Portraits of private persons became an exception in the public space of the *urbs*, whereas the towns in Italy (Ostia, Pompeii etc.) and towns of the provinces could erect statues for their benefactor as had been done before throughout the imperial era. Chapter 4 on location gives a detailed discussion of Rome and its most attractive exposition places. The situation in the provinces of the Empire is exemplified by the discussion of specific sites like Tarragona, Aquileia, Pompeii, Timgad, and Djemila. Lahusen repeats saying that in various cases the same person could be honoured with more portraits than one simultaneously, often in various types. So, the Olympieion at Athens (p. 163) contained a multitude of portraits of Hadrian, the emperor who had completed the construction of this long-lasting building project. As in other chapters, most information stems from the analysis of the inscriptions of bases and not from a study of more or less complete portraits. In chapter 5 on function and meaning, many elements of the previous chapters come together. A brief chapter is dedicated to statues in the emperor's cult, in which Lahusen stresses the use of portable portraits, shown in processions and outdoor festivities. The ancestor portraits are the subject of the succinct, but clear chapter 9 and some words are dedicated to Roman law and portraiture, finally, in chapter 10.

As a consequence of the extensive use of written sources, the discussion of the portraits themselves and their 'art-historical' development is considerably smaller

than a reader who looks for information on the many portraits we know might expect. This might be the reason why the captions rarely bear (a suggestion of) the date of production, but only the name of the portrayed person, if known, and the museum where the portrait is.

Since the book is written as a work understandable for a greater public than hard-core specialists, there are no foot- or endnotes, but lists of publications relevant for the sections or chapters where they are quoted. These lists are very rich and testimony for a thorough knowledge of the vast literature. Many readers will miss the precise references to the ancient written sources, so important in Lahusen's reasoning. See also Lahusen's complete bibliography: [http://publikationen.ub.uni-frankfurt.de/volltexte/2011/9117/pdf/Lahusen\\_Bibliographie.pdf](http://publikationen.ub.uni-frankfurt.de/volltexte/2011/9117/pdf/Lahusen_Bibliographie.pdf)

The work is lavishly illustrated with mostly very good photos, but some are rather useless for the theme, since they do not properly illustrate the topic (e.g. excavation sites, models of monuments and the like). An English translation would be recommendable: Lahusen's book might form a good basis text for a class on Roman portraiture.

Eric M. Moormann

ANNA ANGUSSOLA, *Intimità a Pompei. Riservatezza, condivisione e prestigio negli ambienti ad alcova a Pompei*. Berlin/New York: Walter de Gruyter, 2010 (Image & Context 8). XVIII, 664 pp., b/w figs, col. pls; 25 cm. – ISBN 978-3-11-024089-4/ISSN 1868-4777.

In the beautifully edited final version of her PhD study from 2009, Anna Anguissola gives an in-depth analysis of multifunctional rooms in Pompeian houses that are determined as places for sojourn and rest thanks to the installations of specific spaces for beds like niches and modest platforms. These are discussed in six chapters, followed by an extensive catalogue of the rooms-with-beds (or spaces for beds). Anguissola connects these rooms with the *cubicula* for which reason the first two chapters invest in detail (with some repetitions) the notions of the *cubiculum*, mainly on the basis of textual sources, but with glances upon archaeological records, and with the *diaeta*, a set of multi-purpose rooms connected with reception, relax and sleep. The multiform use of *cubicula* evinces from ancient definitions and descriptions of activities carried out here. As is known from previous studies, the rooms of a Roman house had not a single specific function, but could serve in various ways over the days and nights. Furniture could be added or taken away in respect to activities the owner wanted to do here. Beds were a common feature and sleep was considered a good activity here (e.g. Varro's fancy explanation that *cubiculum* stemmed from *cubatio*; compare Pliny's desire to have them in quiet and remote positions in the house). That could imply a romantic meeting ending up in a sexual play, or a hard discussion between a *dominus* and a client that should not be overheard by foreign ears. However, statal and juridical affairs were not meant to be handled in *cubicula*, but in appropriate public spaces (see Cicero's reproach of Verres' private dealings in Sicily). Whatever happened, domestic slaves



were probably always present, not being considered as members of the family, but as the apparatus managing the household (see the fascinating section on these invisible members of the *familia* on pp. 380-388).

The privacy of *cubiculum* activities requested a clear distinction from, but also a vicinity of the *triclinium*, the room where affiliated activities took place. Both literary texts and archaeological remains substantiate this rule. A person could, indeed, easily withdraw, alone or together with someone else, to have private intercourse, to go and sleep or to make sex. Therefore, those who did not take into account the (unspoken) etiquette hurt the feelings of appropriate behavior in these determined rooms.

Despite later interventions in old houses, the oldest examples of *cubicula* at Pompeii can be dated to the 2<sup>nd</sup> or early 1<sup>st</sup> century BC. These are located next to the *fauces* and the atrium area. The author does not discuss possible earlier examples in other Hellenistic Italic towns, but I must frankly say that I cannot add any older example (cf. pp. 391-392). The relatively large number of these old rooms might be explained according to Anguissola as expressions of veneration of the tradition. In practice, these rooms lost their traditional function in the 1<sup>st</sup> century BC and became more or less out of use, while new *cubicula* found their systematization in the peristyle area. The author meticulously discusses the changes over the time of position, plan, architecture, and decoration, and makes clear that despite differences the function of the *cubiculum* did not change very much.

Detailed chapters include discussions about the relationship between decoration and architectural shape and the position which, after the previous fixed position we have recalled changed over the time. This implies lengthy discussions of the atrium as the centre of the frontal zone of the house and, in the context of later *cubicula*, the peristyle. Floor and wall decorations reflect the demands of the users: they visualize practices like dining and love-making and dreams like the bliss gained from the gods as thought of by the patrons and their relatives and friends. These lengthy discussions offer plenty food for students of the Roman house in all its aspects, and not only regarding the *cubicula*. A dense Epilogue discusses possible *cubicula* in houses in other towns, in Italy and especially northern Africa post AD 79. While reading these pages, I recall the *Wohneinheiten* 1 and 2 in *Hang-haus* 2 in Ephesos (see here the review of a recent monograph, pp. 221-222) - and more houses elsewhere. This complex would be a good candidate for a similar analysis, especially in respect to various small rooms along the peristyles of these houses. In sum, Anguissola's monograph invites us to regard the plans of many houses all over the Roman world with her sharp eyes, in order to understand the dynamics of the use of space.

There are two sets of good colour plates, one of plans, and there is a well organized section of notes followed by a catalogue of the houses taken into account in this enormous work. A good English resume welcomes the readers who are less familiar with Italian. We cannot but congratulate the author with the outcome of this research and hope that its conclusions will find their deserved place in the ongoing discussion on the Roman house.

Eric M. Moormann

ROBERTO EGIDI/FEDORA FILIPPI/SONIA MARTONE (eds), *Archeologia e infrastrutture. Il tracciato fondamentale della linea C della metropolitana di Roma: prime indagini archeologiche*. Bollettino d'Arte volume speciale. Florence: Leo S. Olschki Editore, 2010. 327 pp., num. ill., 3 folded maps, 29.5 cm. – ISSN 0394-4573.

The preparatory works for the construction of the third suburb of Rome are going on for a decade since their inception in 2001. That is a great and a complicated enterprise, since the historical centre of Rome is involved and, consequently, the subterranean archive cannot be ignored. This book is a recommendable introduction into the explorations made on the spots of future stations. Line C roughly runs East-West, from the suburb Pantano to Prati, especially the Vatican area. After some introductory essays by the Soprintendenza's authorities and the editors, the excavators responsible for determined sections present overviews of the work, beginning with the sections in the west. The sizes of the excavations greatly vary due to the traffic and urban situation and the results, consequently, also strongly differ, which can also be explained by the location in (formerly) more or less frequented and inhabited parts of Rome. The time-span investigated runs from late Neolithic (Pantano Borghese) to modern times, the latter often evidenced by debris of palazzi torn-down in the late 19<sup>th</sup> or 20<sup>th</sup> century during the large-scale works after Rome's 'installation' as the capital (1870-1911) and during the Fascist era (e.g. Piazza Venezia). The difference between the actual level and the oldest 'terreno antropizzato' can reach more than thirteen meters, but in practice excavators could work down some seven meters, before risking too great dangers.

The authors work in the venerable tradition of *Topografia romana*, a specialised field of research that sometimes painstakingly succeeds in reconstructing the layout of the old town, based on the combination of archaeological, epigraphic and textual sources. In this brief review I focus on Roman antiquity as encountered *intra muros*.

The Campus Martius is crossed from West to East with a section that more or less follows the late 19<sup>th</sup>-century Corso Vittorio Emanuele. Among the ancient monuments (re-)discovered are the gymnasium Nero built in this area, and the track of the Euripus, a canal functioning as a provision of water for the various water works if the Aqua Marcia would not do its job. The Piazza Venezia excavation has the most extensive share of the book and thanks to the rather large trenches offers most possibilities to produce many data. This site covers the beginning of the ancient Via Lata/Flaminia (now Via del Corso) at the limit of the old *po-merium*. In the central part excavations could not reach the deepest levels, and the large amounts of Mediaeval and later debris obscured the old structures, among which a Flavian series of *tabernae* along Via Flaminia that remained in use until the 9<sup>th</sup> century.

Much more than a rescue excavation is the investigation of the area in front of the Santa Madonna di Loreto, next to the Column of Trajan. Here research is still going on. The results are spectacular and match those

of the excavations and research of the houses under the Palazzo Valentini, opened to the public a couple of years ago (see lastly A. Claridge, *JRA* 20, 2007, 54-94). A Nijmegen PhD dissertation by Pamela Doms on Trajan and the urbanistics of Rome (*Keizer Trajanus en zijn bouwprogramma in Rome*, unpublished thesis 2010) could not yet profit of this work. Remarkable remains of flights of steps belong to rooms with stepped seats that can be interpreted as a sort of lavish class rooms. Roberto Egidi cautiously interprets the remains as the hitherto not located Athenaeum erected by Hadrian in 135. Three rooms were systemized in a half circle next to the southern library of the Forum of Trajan and we may aspect a similar lay-out at the other side, so that the entrance to the column of Trajan consisted of a horseshoe-shaped piazza. This means that the Temple of Trajan still is missing (if it has ever existed; *pace* Claridge and Doms). Lying on the same level as Trajan's forum, this implies enormous works of removing the slopes of the Quirinal, thus endorsing the praise formulated in the inscription on the base of Trajan's Column. For this reason, I would suggest that this complex was an 'antistante Colonna' embellishment of the entrance towards the forum via the Column instead of 'retrostante Colonna' (p. 115): the Column's inscription faces West and addresses visitors entering the forum complex from this side and not those leaving the Basilica Ulpia. In any case, new food for reconstructing the original situation has been provided here. The rooms remained in use until the 5<sup>th</sup> century and matched the tabernae we have seen before. Mirella Serlorenzi sketches the developments of the area in the Middle Ages, when the track of the old Via Flaminia did not alter. With the construction of Palazzo Venezia and other large complexes in the 15<sup>th</sup> century, the zone got a residential character not altered until the late 19<sup>th</sup> century.

The small trenches on the Velia produced some small remains of Nero's Golden House as well as the *Clivus ad Carinas*.

The sections of the Caelius endorse the old topographical studies by Antonio Colini and, more recently, by Carlo Pavolini, but do not offer great innovations except for sections of the rich and huge *domus* of the Valerii. This was already investigated in nearby spots (see M. Barbera, *BSR* 2010). The peep holes dug into the hill substantiate the presence of large *horti* and pavilions inside the lots belonging to important Roman families like the Quinctilii and the Laterani. Since this area called 'Il Vallone' (p. 204, fig. 2) remained practically uninhabited after Antiquity, the traces are very substantial. A part of the sections runs immediately parallel to the outside of the Aurelian wall. Here studies of the landscape in Antiquity and later periods could be carried out. The Amphitheatrum Castrense and the Circus Varianus were hallmarks before the erection of Aurelian's fortifications and the visualisation of the flat countryside with these huge monuments makes the insertions of them into the wall still more understandable. Some tuff quarries could be spotted. In the Middle Ages there was agricultural activity, but the zone became swampy and watermills were necessary to make the ground usable.

The descriptions do not follow a standard format, which in general does not irritate the reader. There is

one confusing matter to be signalled, viz. the different use of 'phases' and 'periods', which, I think, should be standardized as far as possible, so that one can connect the various sites chronologically and, in some cases, topographically. The book's lay-out is splendid and the illustrations are sometimes telling more than the texts.

Eric M. Moormann

*Hephaistos* 27, 2010. New Approaches to Classical Archaeology and related Fields. Münster: LIT Verlag, 2011. 197 pp., some ills; 30 cm - ISSN 0174-2086, ISBN 978-3-643-99902-3.

Although issues of periodicals usually are not reviewed at all, this volume is defined by the editors as a book focusing on one theme (see title) and would, therefore, deserve a brief review. The first paper is about the Italian papyrologist Medea Norsa (1877-1952). Mario Capasso concentrates his paper on her contacts with German scholars, especially Ulrich Wilcken. It does not demonstrate in what sense these eminent scholars were practicing 'new' approaches to their field of studies. Christoph Johannes Franzen presents a fine analysis of the mythology expert Walter F. Otto (1874-1958) who introduced the then popular notion of 'Gestalt' in the research of myth. Although, again, not an archaeologist, Otto's importance for iconographical studies evinces from the influence of his *Götter Griechenlands*. He was rather a theologian than a student of religions, since he tried to understand Greek religion 'von innen her' (p. 27). In his eyes, artifacts with images of gods had a greater value than many texts to explore the realm of the Olympian gods. The strong emphasis on esthetic qualities of Greek culture makes his work arbitrary, but Franzen wants to stress the innovation brought by the adaptation of other research methods than classical text analysis. His conclusion brings in possible Nazi tendencies, to be denied despite Otto's successful university career between 1933 and 1945, because his enthusiasm relied on beauty, not on race. Franzen should have elucidated this aspect more extensively. Now, he seems to act as many scholars criticized by Manderscheid (see below), giving too little and suggesting too much.

After these representatives of 'related fields' Ranuccio Bianchi Bandinelli (1900-1975) stands for classical archaeology. His biographer Marcello Barbanera limits his paper to the vital decades 1920-1960, when BB explored the quintessence of Roman art as led by its *Kunstwollen*, the method founded by Alois Riegl. Later, he also employed sociological and Marxist theories to explain the development of Roman art.

These rather brief sketches are followed by a thorough paper by Hubertus Manderscheid on German classical archaeology under Nazi regime. He starts with a sketch of the awkward relationship of post-war German archaeologists with Nazi history and points out that non-archaeologists paved the way to a full assessment of the behavior of German archaeologists towards fascism. The project of *Lebensbilder* launched by Gunnar Brands and Martin Maischberger (p. 44) forms the necessary substitute of previous collections of brief bios of German archaeologists. In his paper, loaded with many lengthy but very informative footnotes, Manderscheid

incessantly denounces famous scholars like Gerhart Rodenwaldt (suicide, April 1945), Armin von Gerkan and Reinhard Herbig who had negative influences on the careers of Jewish and anti-Nazi colleagues. Even Ludwig Curtius, often seen as a victim, who represented himself as an adversary of the Reich, does not turn out fully harmless (e.g. pp. 58-59). Manderscheid is more irritated by the neglect of interest and compassion of the after-war generations than by the Nazi archaeologists and their fellow travelers. It leaves a bitter aftertaste ('bitterer Nachgeschmack', p. 64), not only with him but also with me.

Wulf Raack's paper concludes this part of the volume, explaining Rodenwaldt's view of Roman art as the result of Strukturforschung and Stilwollen based on the works of Riegl and Wickhoff (s. supra). Roman art is a positive phase after Greek art, hitherto seen as supreme. He does not rely on notions like race and kinship, in contrast with the Nazi's, but on those of nation and 'Volk'. In these respect he differs from the mainstream of German archaeologists, of which he briefly presents Ernst Buschor (pp. 78-79).

These contributions are less devoted to archaeology than the title suggests, and as a whole the set is rather random. The remainder of the volume is a 'normal' journal, surely in the vein of Hephaisistos' tradition, but not so extraordinary to be reviewed. One of Hephaisistos' editors, Burkhardt Fehr, writes on Archaic Greek art and its stylistic paradoxes. The rendering of the body is determined by 'körperästhetische Konzepte', which can be deduced from contemporary literary sources. Anika Greve presents Hellenistic funerary monuments in Nea Paphos characterized by the presence of courtyards, fountains and altars. This essay is part of her PhD dissertation defended in 2010 at Hamburg. A brief paper on landscape archaeology as too little practiced in German classical archaeology by Michael Teichmann might belong to the set discussed above. After a *tour d'horizon* of various countries he concludes a dearth of German practices in classical archaeology and tries to explain it in various ways. Helmut Ziegert's 'Adam kam aus Afrika - aber wie?' closes the volume and tackles palaeohistoric themes like the origin of mankind, a theme that is far from what classical archaeology represents. The reason for insertion of this paper remains unclear and Ziegert might miss the audience he is writing for.

Eric M. Moormann

MILENA MELFI, *Il santuario di Asclepio a Lebena*. Athens: Scuola Archeologica Italiana di Atene, 2007. 234 pp., 89 figs, 11+III tav.; 31 cm (Monografie della Scuola Archeologica Italiana di Atene e delle Missioni Italiane in Oriente XIX). ISBN 978-960-87405-8-7.

Italian excavations in Lebena, Gortyn's harbor on the south coast of Crete, started ca 1900 and lasted until 1912, under the guidance of F. Halbherr. Except for one brief preliminary report, the results were never published in one comprehensive study. The better part of the 'giornali di scavo' got lost; a few scraps on the temple of Asklepios and a brief general report on the topography of the site by A. Taramelli is all that is left. In her fourth

appendix M. gives the text of T.'s report. The inscriptions of the site have nearly all been included in M. Guarducci's *Inscriptiones Creticae* I, section XVIII. In her first appendix M. presents 52 inscriptions, with Greek (and in two cases Latin) texts, Italian translations, bibliography and brief comment; 50 of them are in *I.Cret.*, the other two (nos 36 and 47 in M.'s appendix) in *SEG* XLVII 1403 and LIV 863 respectively. M., unfortunately, ignores *SEG* in her work.

In her first two chapters M. meticulously describes what these scarce sources reveal about the site in general and the temple in particular. In a long second chapter (37-99) M., on the basis of her findings from chapter 1 and detailed explorations of what remains on the site at present, offers a detailed description of the temple, the adjacent structures (two stoas) and the sacred spring in the several stages of (re)construction up to the Severan period. Maps I and II help the reader to imagine what the site looked like. The impression remains that, since Halbherr, the site has considerably deteriorated. Very little, for example, has been preserved of the flight of steps leading up to the sanctuary, and the otherwise excellent photos of what is left of the site nowadays are pretty depressing.

Illuminating, however, are the tabular surveys of the various building operations between the 4<sup>th</sup> century BC and the Severan period. These surveys neatly combine what inscriptions tell us about building activities with the results of the archaeological survey. The most important buildings, mentioned in the inscriptions, have all been located on the site: temple, thesauros-room (complete with large hole into which worshippers/patients could throw the dues required), the incubation stoa, the sacred spring and a nymphaeum.

M.'s discussion of these buildings elicits the following comment. As to the function of the thesauros, M.'s argument seems somewhat ambiguous. On the one hand she writes that the money, owed by the visitors of the incubation hall or by those who want to make a sacrifice to the deity, was to be thrown into the thesauros; on the other hand she seems to distinguish two types of thesauroi: a 'cassetta per le offerte' (i.e., 'offerte preliminari', i.e., money) and a 'pozzo per le offerte', i.e., a true safe deposit for the 'custodia permanente dei beni preziosi'. Lebena's thesauros belongs to the latter type (87/88). I see no consistency here. In the late 3<sup>rd</sup> century BC the thesauros seems to have been closed temporarily. M. attractively connects this phenomenon with the political turmoil during the so-called Lyttian War, when looting may have been a distinct possibility (77 and 134-136). During the building operations in the Severan period the thesauros was 'completamente obliterata dalle nuove costruzioni' (88). M. writes that a subterranean access is 'non più ricostruibile' (96), but nevertheless infers from the fact that inscription no 48 (3<sup>rd</sup>/4<sup>th</sup> centuries AD) was found near the thesauros, that the thesauros continued to be used through a 'struttura sotterranea' (96, 195). The leap, however, from the find-spot to the actual use of the thesauros and to the concomitant assumption about a subterranean access seems unwarranted.

Another problem concerns the *choros* ('dancing place') which ca 100 BC was repositioned by two cultic officials 'away from the *adyton*', i.e., from the so-called north stoa,



where the incubation-rites were practiced (inscription no 23). M. advances the hypothesis that the *choros* was moved from the *adyton* towards the large paved square in front of the temple; in that area archaeologists found the remains of the foundation of a cylindrical altar and a water-vessel built into a wall. In front of the temple there was an impressive flight of steps (81, 97/98 and 178). In addition to ritual dancing ritual singing may have been practiced. M. even writes about the 'caratteristiche teatrali' of the same area. Evidence for other Asklepieia mentions a 'sacred theatre' for choirs (144). It remains, however, problematic that the archaeological remains in front of the temple point to sacrificial activities (altar) and ritual cleansing (water-vessel), not to singing and dancing. Lebena may simply have been too small a temenos for it to be compared with Asklepieia in larger cities like Athens and Pergamon. That ritual dancing (and perhaps singing) took place in Lebena is fair enough; but where exactly it was practised after the relocation remains a problem. For the time being a decent dose of agnosticism seems preferable.

M.'s third chapter is devoted to 'La vita del santuario' but, in fact, boils down to concise and convincing sections on the cultic officials (*kosmoi*, *hiarorgoi*, *nakoroi*), the distribution of competences among them, the dedicators and their dedications, and the doctors. In all this, M. uses the comparative method fruitfully, adducing material from other Asklepieia to define, as precisely as possible, the competences. For most officials prosopographic links with Gortyn are evident. As to 'i medici' (109), M. rightly points out that the sources shed no light on who were responsible for the various prescriptions and the surgery, on record in some of the healing-inscriptions. *Iatroi* are not on record in the extant inscriptions; possibly the *zakoroi*, or at least some of them, had medical expertise. In her analysis of the Lebenian *iamata*, M. rightly writes that for many of the prescribed cures there are good parallels in the medical literature (109, 168, 170, 182). For the problem of the relation between religious and contemporary scientific medicine a reference to H. Müller, *Chiron* 17 (1987) 193-232 (SEG XXXVII 1019) would have been helpful. For the Lebenian healing-inscriptions (*I.Cret.* I, section 18, nos 9, 11/12, 14 and 17-20) cf. now also Cl. Prêtre/Ph. Carlier, *Maladies humaines, thérapies divines. Analyse épigraphique et paléopathologique de textes de guérison grecs* (2009).

The fourth and final chapter deals with the history of the Lebenian sanctuary and its predecessors. For the origin of the cult there is conflicting evidence. Pausanias writes that the Asklepieion in Lebena was a branch of that in Kyrenaikan Balagrae (cf. no 3 in app. II, where M. collects eight literary testimonia for Lebena). In inscription no 10, however, provides good evidence for an Epidaurian origin. In addition M. has collected many parallels between Epidaurian and Lebenian cult-practices. The foundation of Lebena in the 4<sup>th</sup> century BC fits in with the general picture of Epidaurian expansionism. Pausanias may have fallen victim to Kyrenaikan propaganda. Though in the combined Roman province of Crete and Kyrenaika, Gortyn became the capital, Kyrenaika was much richer than Crete's south coast; its superiority-complex may have resulted in exaggerated cultural and religious claims.

M. admirably succeeds in linking the successive

stages in building operations in Lebena to concrete political and economic developments and specific historical circumstances. For the description and analysis of the archaeological remains this may well be the definitive study. Admittedly, history is viewed by some historians as a 'debate without end'. For some subjects, however, the debate can apparently be closed. Differences on nuances may continue to exist but the main story is in this book, which excels in admirably contextualizing the ruins and its inscriptions.

H.W. Pleket

NICHOLAS D. CAHILL (ed.), *Love for Lydia: A Sardis Anniversary Volume Presented to Crawford H. Greenewalt, Jr.* Cambridge (Mass.): Harvard University Press, 2008. XVI, 249 pp., 20 pls; 31 cm. – ISBN 978-0-674-03195-1.

This magnificent and lavish volume commemorates two events: the 50th anniversary of G.M.A. Hanfmann's founding of the Sardis Expedition and the 70th birthday of C.H. Greenewalt Jr, who became field director of the Sardis Expedition in 1976. The tribute by editor Cahill to G. is impressive and almost moving: an inspiring, generous, collegial, and, above all, kind man. I met G. once in Berkeley and I can confirm that all these *epitheta ornantia* are in no way exaggerated. The relations between G. and his colleagues and pupils are well summarized in the cosy-name 'Greenie' which appears in most contributions to this volume. The depth and focus of 'Greenie's' work appear from his bibliography (XIII-XVII).

The first three contributions concern a late Lydian tumulus at Lale Tepe, ca 11 km west of Sardis, one of, at least, seventeen tumuli around the modern town of Ahmetli. The Lale Tepe (and various other tumuli near the town as well) has been the object of a few salvage excavations by the Manisa Museum and unfortunately also of many illegal looting and pillage expeditions. The illegal treasure-hunters do not even shrink away from visiting the tumuli in between the official investigations of the Manisa Museum. In spite of all the devastations, it is clear that the earthen mound covers a chamber tomb complex consisting of a *dromos*, a porch and the chamber itself (with entrance-door); the chamber contained several painted *klinai* (funeral couches) and its walls were decorated with colorful geometric designs in paint. The complex dates to the Late Lydian period, ca 500 BC, 'squarely in the period of Achaemenid governance in Lydia' (78).

C.H. Roosevelt (1-23) briefly summarizes the work done on the tumulus by the Manisa-people, notices the destruction by looters, describes the *dromos*, porch and chamber, with special reference to the three *klinai* and finally presents a catalogue of the finds (pottery; fragments of architecture). Ph.T. Stinson (25-47) examines the architecture and the polychrome painted patterns and concludes, inter alia, that there are clear connections with Ionic and architectural tradition and with Phrygian rock-cut tomb paintings (46). E.P. Baughan (49-78) studies the three monumental stone *klinai* (one of which is a double one, and also at a higher level than the others), on which the dead bodies were placed, and points out that *kline* burial is closely tied to the funer-

ary banquet and thus a means of identifying the dead as members of a leisure elite (50). She examines in great detail the decorations carved and painted on the beds; on some slabs palm trees appear, rendered in green and black against a red background, and unparalleled as couch decoration (69 and 74). Whether they are indicative of deep thoughts about rebirth and immortality or reflect the leisure culture of Achaemenid and Sardian members of the elite (69/70) is a problem which is likely to remain un(re)solved, until hopefully an accompanying inscription reveals some kind of ideology. The idea behind the elevated position of the rear *kline* is hard to catch. It runs counter to the egalitarianism of Greek commensality and symposia; it possibly is to be connected with Achaemenid court practice but a relation with 'native Anatolian cultures' (77) cannot be excluded. In the end B. takes refuge in the concept of 'cultural hybridity of Lydia in the Persian period' (78); a comfortably vague expression with little explanatory potential.

Of the remaining ten contributions three are not related to Sardis. E.R.M. Dusinberre (87-98) offers an interpretation of a seal from Gordion; G. Umholz (99-110) presents some thoughts on 'Feminine piety and early Hellenistic Boukrania'; she studies the Rotunda of Arsinoe II on Samothrace and the temple of Demeter in Pergamon, built by Philetairos and Eumenes on behalf of their mother Boas; and we are asked to believe that the decorative schemes and the dedicatory formulas reflect 'especially the piety, modesty, and traditional virtues' of the women concerned. Boukrania, altars and *phialai* are 'symbols of religious practice' and 'religious life was one of the very few areas in which Greek women of the elite could exercise a prominent public role' (104); but surely the aforementioned symbols could also be seen on architectural blocks and altars dedicated by men to deities, whether male or female. Arsinoe II would have been well advised to choose other ornaments, which more exclusively would hint at specifically female virtues; F.K. Yegül, well-known from his studies on Roman Baths and Gymnasia, offers an essay on the Austrian architect Adolf Loos, whose name I must confess was totally unknown to me, and his views on classical architecture (187-204). The remaining seven articles all concern Sardis. A. Ramage (79-84) found under a Roman house the remains of a Lydian shop specialized in mending pots. Instead of being satisfied with this discovery, based on meticulous analysis of a number of hydria necks, he indulges himself in speculations on the motives of the menders: not just economic considerations but morality bent on preserving the value of an old broken pot: Lydian frugality. We may, however, take this as a bit of a joke, given his reference to Greenie's habit of wearing patched shorts, oversewn boots and provisionally repaired spectacles. 'Greenie' may appropriately be called 'Mr Sardis' or perhaps even 'Mr Lydia', but his frugality cannot be retrojected so easily onto Lydian potters of the archaic period.

Two other contributions concern the urban topography and layout of Sardis. N.D. Cahill (111-124) deals with the contributions made by new survey methods (GPS; magnetometer) to the study of the development of Sardian urban structure: 'the relationships between the urban structures of Lydian and Roman Sardis are closer than we have suspected' (124). The new methods

reveal traces of structures which in the future can hopefully be excavated. Ch. Ratté (125-133) would like to know what Sardis looked like ca 334 BC, when Alexander the Great conquered the city, and in the succeeding Hellenistic centuries when the city was controlled by Seleucids and Attalids; in other words, 'How was the process of Hellenization enacted in its urban and architectural evolution?' (137). In Alexander's time the Lydian city was situated around the Acropolis, with many large open areas in the habitable area of the lower city; there was a Hellenistic theatre and, possibly, an agora; for the rest R.'s conclusion is that 'very little can be said about the overall organization of the city' (131). Apart from the identification of a destruction layer dated to shortly before 215/214 BC (years of Seleucid siege and sack of the city) and R.'s conclusion that there is no clear evidence for *widespread* devastation, there is very little archaeology can contribute to the study of the political vicissitudes of the city and to the problem of the political structure of the city. The old Lydian community remains unknown as a political entity and Ph. Gauthier's view, based on a number of interesting inscriptions (*SEG* XXXIX 1281-1289) that a polis-structure, with the concomitant political institutions, came into existence ca 225-220 BC, seems the best guess available up to now. Archaeology and political institutions are not a happy couple!

D.G. Mitten and A.F. Scorziello (135-146) study the spolia used in the Jewish synagogue, and pose the question to what extent the choice of specific and visible spolia may have been 'relevant in some specific way to the Late Roman Jewish community' (147). Whereas a large marble kantharos obviously was relevant, because it was re-used by the Jews for attaining ritual purity, for most other objects a satisfactory answer seems as yet impossible: 'much more research will be needed' (146); but whether that will bring solutions seems questionable. Some questions are so sophisticated and modernistic that *a priori* answers are likely to be extremely hypothetical and anachronistic. M.L. Rautman (147-158) offers a perceptive study of the apsidal Room 6, part of a Late Roman residential complex close to the Bath-Gymnasium complex, with special reference to the frescoes on the walls, with complex geometrical ornaments (cf. the beautiful reconstruction on Plate 15/16; much more impressive than what is actually preserved on the walls (Plates 17, 18a, 19a)). The apsidal Room probably was a triclinium, on which a small group of diners, invited by the owner of the house, had a good time. The house reflects an 'Aura of affluence'. B. Burrell (159-169) examines 'small bronze hoards at late 5<sup>th</sup> century CE Sardis', whereas K. Severson (171-185) writes on conservation techniques used in Sardis during Greenewalt's directorship. The book is an aesthetic jewel, with splendid drawings, plates and photographs. The color photo of the paintings on the *klinai* and on the walls of the 'affluent house' are especially to be recommended. 'Greenie' can be satisfied with and even proud of what colleagues and students have produced for him. I cannot get particularly excited about the phenomenon of the 'Festschrift', but if there is to be such a thing altogether, 'Love for Lydia' may serve as a paradeigma.

H.W. Pleket

JAKOB MUNK HØJTE (ed.), *Mithridates VI and the Pontic Kingdom*. Aarhus: Aarhus University Press, 2009. 375 pp., figs; 24,5 cm (Black Sea Studies 9) – ISBN 978-87-7934-443-3.

Mithridates VI Eupator is renowned (or notorious) above all for his struggle with Rome. In 87 BC he invaded Asia Minor, killed 80.000 Roman citizens and was audacious enough to continue his campaigns in Greece. In the end he lost; his Pontic kingdom was combined with Bithynia by Pompey into a new province. The main historiographical debate is about what sort of monarch M. was in his relations with Rome. The two main streams in this debate are represented by J.M. Madsen and Br.C. McGing. In his 'The ambitions of Mithridates VI: Hellenistic kingship and modern interpretations' (191-202) Madsen argues that Mithridates was a true Hellenistic ruler, bent on expansion but not at all costs. He invaded Bithynia and Paphlagonia but in 90/89 BC he gave in to a senatorial commission and withdrew his forces. In 90/89 BC the commission 'provoked Mithridates into beginning the war' (197). The king did not deliberately aim at a war with Rome that would end Roman Rule in Asia Minor; instead he aspired to 'enlarging his kingdom as far as possible, without engaging in a war with Rome' (200). McGing ('Mithridates VI Eupator: victor or aggressor'; 203-216) draws a different picture of 'an ambitious Mithridates, who does move consciously, if carefully, to a show-down with Rome' but is not a new Hannibal (204). The monarch's 'compliance in stepping back from the precipice on a number of occasions' (i.e., his concessions to the senatorial commission) is just 'apparent. In reality he wanted war' (210).

This is not the place to participate in this debate in any detail. One wonders, however, what could justify Rome's meddling in Cappadocian affairs. In other words, it seems to me conceivable that Mithridates, an expansionist in line with the ideology of other Hellenistic rulers, thought he would be entitled to have a bigger stake in Cappadocia than would Rome. When the latter made it clear that that was not a good idea, Mithridates just waited for the right moment to strike back. Rome's involvement in the Social War provided just such a moment. Rome always had a natural talent for concocting bait that would lure big fish like Mithridates to strike.

All the other articles in this volume look at Mithridates and his kingdom from within, not through the lens of later historiography and the many scholarly interpretations of it, but using numismatic, iconographical and archaeological evidence in an attempt to design a picture of the monarch, his policies and ideology and the structure of his Pontic kingdom. M.'s expansionistic drive is underpinned both materially and ideologically. Studies by De Callatay ('The first royal coinages of Pontos'; 63-89), Smekalova ('The earliest application of brass and "pure" copper in the Hellenistic coinages of Asia Minor and the northern Black Sea coast'; 223-248) and Gavrilov ('Coin finds from the Kuru Baš fortified settlement and some questions concerning the history of Theodosia in the late 2<sup>nd</sup> and 1<sup>st</sup> centuries BC'; 329-352) all have in common the vast increase in the output of coins under Mithridates VI, both royal Pontic silver coins and bronze civic issues. Smekalova points out

that brass and pure copper were used as additional monetary resources in an attempt to increase output. M.J. Olbrycht ('Mithridates VI Eupator and Iran'; 163-190) comes up with the interesting suggestion that the Parthians, apart from supporting Mithridates' stand against Rome in general and in Cappadocia in particular, may have supplied metal resources (172). It comes as no surprise that all these authors propose a correlation between vastly increased monetary output, growing military expenses and the king's expansionist policies. In matters of detail there is room for divergent interpretations. Whereas De Callatay argues that it is not until mid-89 BC that there is a sudden surge in royal issues and that, therefore, Mithridates must have been taken by surprise by the beginning of the war and thus is not likely to have planned a show-down with Rome long before, McGing disagrees and argues that 'the equivalence between events and coining cannot be that close' and that 'there is no cast-iron connection between military activity and minting' (211/212). We are left with the conclusion that there is just a general link between Mithridates as an ambitious expansionist and his minting policy: for expansion one needs an army and for an army one needs money. In this connection Højte ('The administrative organisation of the Pontic kingdom'; 95-107), in his reconstruction of the settlement patterns in Mithridatic Pontus, offers the interesting suggestion that under the king's rule urban centres became larger, were characterized by having strongly fortified citadels housing garrisons, and that the coins struck by those towns were used by royal strategoi to pay for those garrisons.

Ideologically, M.'s expansion-driven policies are underpinned by his continuation of the line of the Achaemenids and of Alexander the Great. Fleischer ('The rock-tombs of the Pontic kings in Amaseia'; 109-120) writes about Iranian influence in the architecture of the tombs (115) but adds that 'un-Greek' does not necessarily mean 'anti-Greek'. Mithridates adopted the Achaemenid title 'King of Kings', as pointed out by Olbrycht (165), Gabelko (53) and McGing (205). In a brief and, through no fault of the author, rather unrewarding study of the Pontic temple-states, Sökmen writes that 'the Persian deities had importance for the official religious policies of the Mithridatic kings' (281). In studies of Mithridates' portraiture Kreuz ('Monuments for the king: royal presence in the Late Hellenistic world of Mithridates VI'; 131-144) and Højte ('Portraits and Statues of Mithridates VI'; 145-162) both refer to resemblances between (coin-)portraits of Mithridates and those of Alexander the Great (133, 146); H. writes that Mithridates 'was the new Alexander that had liberated or would liberate the Greeks from their oppressors, this time not the Persians but the Romans' (149). If that is true, it confirms the concept of Mithridates as an ambitious conqueror, but not as a new Hannibal. That Mithridates was thrilled by exhibitions of military courage, appears from a recently found inscription from Bosporan Phanagoreia, mentioning his wife (or concubine) Hypsikrateia. In the inscription, however, she is called Hypsikrates which confirms Plutarch's remark (*Vita Pompeii* 32.8) that Mithridates so admired her manly courage that he called her by the male name Hypsikrates (SEG LVI 934).



Above we referred to H.'s study of the administrative organization of the Pontic kingdom. In addition to Sökmen's contribution (cf. above) there is a report about the results of recent survey-work at the site of Komana by Erciyas ('Komana Pontike: a city or a sanctuary'; 289-212). In spite of the creation of a 'digital terrain model' of the site and of 'geophysical prospection' the author modestly concludes that 'the site of Komana remained a mystery for us'. It is always useful to know that one does not know very much.

Mithridates' empire-building ambitions drove him to conquer the Bosphorus. Molev ('Bosphorus under the rule of Mithridates VI Eupator'; 321-328) deals with the way this part of M.'s kingdom was administered (probably by a governor-general) and with the military forces active in the area (cf. also *SEG* LV 855 for a Mithridatic governor in the city of Olbia and LVI 870 and 880 for Mithridatic troops in Bosporan cities; cf. also *SEG* LVI 845 for a Mithridatic governor in Histria and more in general for his influence on the Pontic west coast). He analyzes *SEG* XLI 625, showing that the Greek city of Phanagoreia rewarded mercenaries, who apparently served together with citizen-soldiers, with citizenship and various other privileges. Molev assumes that these mercenaries were to stay in the city; this is possible but not certain. He disregards Ph. Gauthier's alternative interpretation (cf. *SEG*), according to which the mercenaries were just potential citizens who were about to leave the city and to join Mithridates' main force in Greece (see now *SEG* LVI 930 for still another interpretation of XLI 625).

The over-all conclusion is that we have a useful collection of essays, which try to diversify our image of Mithridates and to break away from the picture conveyed by later, rather biased literary sources. Through no fault of the authors, their contributions do not shed much light on the Madsen-McGing controversy, though they do offer information 'from within' about the Pontic king being both a new Achaemenid and Alexander the Great and thus an ambitious conqueror.

H.W. Pleket

P.G. BILDE/J.H. PETERSEN (eds), *Meetings of cultures in the Black Sea region. Between conflict and coexistence*. Aarhus University Press, 2008, 422 pp., figs; 24.5 cm (Black Sea Studies 8). -ISBN 978-87-7934-419-8.

The title of this book (and of the underlying conference) is programmatic: we no longer talk about colonies in the Black Sea region but about settlements. The word 'colonies' smells of colonialism, i.e., of superior and inferior cultures, of 'our' culture versus 'theirs', of 'us' versus 'the other' and 'altérité'. The latter perspective is 'more easily visible in the literary sources than --- in the local, material sources, be they epigraphy or archaeology' (Preface on 10), and since the organizers of the conference prefer to focus on 'lived or real life' rather than 'life in the world of ideas' (ibidem), we are treated to a pretty heavy and variegated cocktail of sixteen papers on settlement patterns, with special reference to the demarcation of the *chora* and land divisions between Greeks and the indigenous population (carelessly and in a flash of old-fashioned vocabulary called 'barbar-

ians' in the Preface on 11!!) and on Greek and indigenous features in specific archaeological artefacts (burials; pottery).

Some papers do not deal with the Pontus Euxineos at all but are included for comparative reasons: Attema (67-100) writes about the contacts between Greek and local settlements in Calabria, Baralis (101-130) on the *chora*-formation of Greek settlements in Aegean Thrace, whereas Summerer (263-286) deals with the relations between Greeks and natives in northern Anatolia, with special reference to architectural terracottas. Two articles concern Colchis: M. Vickers/A. Kakhidze (131-148) report on the excavations at Pichnvari, where Greek and Colchians encountered; E. Kakhidze (303-332) deals with a Roman fortress at Apsaros, mentioned in literary sources and inscriptions, where 'no obvious sign of mutual influence' can be observed (319).

In Pichnvari excavators found a Colchian and a Greek cemetery, close to but clearly separated from each other. Whereas in the Colchian cemetery finds had affinities with the Achaemenid world (137), in the Greek equivalent Greek artefacts seem to predominate. V./K. on the one hand write 'about the evident differences between the more or less contemporary cemeteries' (137) but on the other hand the proximity of the two cemeteries is said to be 'evidence of a close and peaceful relationship' (137). In the end they opt for the latter view and interpret the differences as 'social differentiations within a society that was already multi-cultural' (139), whereas five pages earlier they introduce 'ethnic distinctions' (134) as the cause of the 'evident differences'. The multi-cultural society is, of course, the politically correct concept par excellence but I really do not see why two *separate* cemeteries, with *different* types of finds, should be interpreted as evidence for social differentiation within an admittedly *multi-cultural* but ultimately rather homogeneous society. Social differentiations on the basis of ethnicity is what we seem to have here; within the ethnically-oriented Greek necropolis there is social differentiation between richer and poorer Greeks (140).

P. Attema's report about the excavations and surveys by Italian and Dutch archaeologists in the Sibaritide in Calabria owes its incorporation in this volume to the fact that it may serve to compare the Calabrian results with those of a combined Danish/Dutch/Ukrainian survey project in the Crimea. A.'s main question appears in the title of his report: 'conflict or coexistence?', i.e., between natives and Greeks. The answer based on detailed analysis of, above all, the site of Timpone Motta near Francavilla Marittima in its many phases and especially of the ceramic finds and the architecture of several otherwise very poorly preserved 'buildings', is that it all began with coexistence between indigenous settlements and small groups of Greek settlers and ended with Greek domination with the advent of urbanization in the plain of Sybaris and a concomitant hierarchization between town and countryside (90). What we really want to know, however, namely to what extent natives became tenants on plots pinched by the Greek invaders, archaeology does not tell us. The initial coexistence in the 7<sup>th</sup> century BC was realized either in native or new settlements founded by Greeks and attracting native people (76/77); but whether Greeks actually lived together with natives in the early settle-

ment of Timpone is hard to decide. Attema and his colleagues perhaps too easily equate the presence of Greek ceramics or the adoption of Greek building-techniques with the actual presence of Greek people. Simple contacts suffice to explain the increase of Greek influence; about the political and especially the power-relations between the two groups uninscribed archaeological objects do not tell us very much. It is a pure hypothesis that Greek pottery, dedicated in the temple at Timpone, implies Greek involvement in cult activities (82); natives may have adopted Greek practices instead of Greeks cooperating on the spot with them. In this respect the absence of written dedications in the indigenous language(s) but using Greek letters (as in Aegean Thrace: see Baralis on 115) is regrettable. Apart from all that, I notice that in the end A. opts for 'coexistence hover(ing) between conflict and cooperation' (94); I cannot, however, help pointing out that A. never refers to 'conflict' in his elaborate description of the settlements. The truth of the matter is that the Calabrian activities do not allow us at all to draw conclusions about the way people actually behaved toward and felt about each other. Sometimes archaeology boils down to 'much ado about not very much'.

Three papers (Karjaka, Gavrilov, Smekalova; 181-213) deal with the exploration of the countryside near Olbia and in the Kerch peninsula on the basis of aerial photography, satellite images, geophysical prospection and archaeological surveys. Karjaka's study of Olbia gives at least some idea about the extension of Olbia's chora, the variety in size of agricultural plots and the distance between plots and urban centre. Many fields are not within walking distance from the city, which elicits the question to what extent cultivators lived (or not) *extra muros* and Olbia was an agro-town. As yet there are no quantitative data. Gavrilov and Smekalova report on investigations of parts of the Kerch peninsula, yielding some information on settlements and land-plots, but both papers suffer from the fact that, in spite of the use of the most advanced technological devices, the areas concerned yield little information. Smekalova writes that in the area investigated by Gavrilov, there were plots of ca 12.25 hectares (208); whether owned or leased by one person, this may indicate an agrarian middle class; hardly exciting and insignificant to the extent that so far archaeology has not generated data on the numbers of such (and other) plots; and even if it will do that in the foreseeable future, it does not tell us much about the status of the people working on those plots. Karjaka has another paper on the reconstruction of a Hellenistic defense-wall of Olbia on the basis of new excavations (163-180). These four contributions have no link with 'Meetings of cultures'; I suppose they have been included because they make available in an internationally accessible language data published in Russian.

J. Hjarl Petersen (215-235) explores the ca twenty funerary tumuli near Nymphaion; her analysis shows that in 5<sup>th</sup> century BC tumuli grave goods (weapons, horse equipment, Attic ceramics for drinking and banqueting) point to a strong ruling elite. Previously scholars argued that it is the Scythian elite that was buried here; it consisted of 'connoisseurs of Greek luxury goods', in short of 'Hellenised barbarians' (221); a perfect example of 'meetings of culture'. P. rightly argues that the

ethnicity- problem is hard to solve 'solely on the grounds of the archaeological record'. Instead she comes up with a Nymphaian political elite fighting for maintaining its independence from the Bosporean kingdom; in the 4<sup>th</sup>/3<sup>rd</sup> centuries BC tumuli weapons are absent; oil-related pottery and strigils point to a world in which 'athletic strength, youth and focus on hygiene may have played a central role'. These expressions of the elite fit in with the changed political situation: Nymphaion had joined the Bosporean kingdom and as a result there was no need for military orientation; an intriguing interpretation. Incidentally, ignoring the ethnicity-problem is not the same as denying its existence. It is merely the deficiency of the available evidence which almost imposes the obligation not to engage in a discussion about the problem: it may have existed but we cannot know; unwritten archaeological evidence has its severe limitations, in spite of the most advanced technological methods and devices. The latter do not make up for the absence of written evidence.

If problems of ethnicity elude Petersen's attention, problems of social stratification come into play in N.A. Gavriljuks' essay on specific finds in Steppe Scythian burials of the 5<sup>th</sup>/4<sup>th</sup> centuries BC (237-261). She continues the line begun by C. Renfrew with his 'social archaeology' (237) aiming at the reconstruction of social structures in archaic (and largely illiterate) societies. Her analysis of black glazed pottery found in burials of Steppe Scythians boils down to a series of highly speculative conclusions; hardly surprising given the fact that her basic methodology is questionable. G. writes that she focuses on 'burials in which the functions of the black glazed vessels could be determined and where data on the property status of the deceased was accessible' (italics added; 239). What on earth is the surplus-value of pottery as 'an indicator of social status' (ibidem) if one a priori selects burials of deceased for whose property (= social) status one already has other evidence? Let us, however, not be petty-minded and consider her conclusions. Many pots were drinking vessels, found together with weapons and silver vessels. This points to soldiers and it is not unreasonable. In female burials such vessels were found with spindle and mirrors and as a result may have been used 'for the storage' of such objects, as if females are not supposed to have been thirsty during or after their life on earth. The worst is still to come! The soldiers are suddenly defined as a 'middle class' consisting of 'representatives of the Scythian aristocracy' who 'made up 15-20% of the entire population' (254). A reference to one highly inaccessible article in an equally inaccessible Ukrainian publication is supposed to satisfy our curiosity. A truly crowning sensation is the casual remark that some black glazed pottery is found together with a set of silver vessels in burials of the 'highest Scythian elite'. One cannot have its pudding and eat it. Silver vessels cannot in one set of conclusions be used as indication of both middle class and elite status. Three minor details do not mitigate our judgment: on 239 we are promised a table with a list of burials at the end of the article but there is no such table; secondly, on 253 there is a muddled series of disconnected sentences; thirdly, the presence of graffiti with Greek letters on some pots is supposed to point to a belief in the 'magic

properties' of such graffiti; and this in turn leads G. to suggest that 'priests could have been engaged' in the trade and exchange of ceramics' (253). This is fantasy, not sound scholarship.

V. Mordvintseva (47-65) offers a highly specialized paper on phalerae of horse harnesses found in the North Pontic region. She discerns two, otherwise not particularly different, types: one from the area east of the Wolga, the other from the North Pontic area west of the river, where it arrived during the last centuries of the pre-Christian era (47). Most archaeologists and historians have discerned links between these phalerae and what M. calls 'the Sarmatian paradigm': the phalerae originated east of the Wolga and waves of Sarmatian invaders brought them to the North Pontic area. The 'Sarmatian paradigm' is discussed at great length and subsequently discarded by M. She argues that there is no evidence for a Sarmatian culture east of the Wolga and a Sarmatian invasion in the North Pontic region. Whereas she admits that in the Wolga area a 'distant eastern influence is definitely clear in the material culture' (61), for the northern Pontic area she suddenly advances the theory that the phalerae are to be related to western Pontic territories (56, 61), referring to three highly inaccessible Ukrainian publications. For the non-initiated this hypothesis comes completely out of the blue. We are left with the question why phalerae showing eastern influence are, if not similar to, at least not significantly different from those allegedly shaped by western influence.

N.G. Novičenkova (287-301) writes about the findings in an indigenous sanctuary in mountainous Crimea. These nicely reflect the successive relations between the mountain dwellers and the 'Umwelt' of the Greek cities, the Bosporan kingdom and the Romans. However, once more a series of audacious hypotheses spoils our pleasure. The spatial structure of the late 1<sup>st</sup> century BC sanctuary demonstrates 'its creators' notion of cosmogony'; the sanctuary became 'a model of the world' (291) and, even more fantastic, ideas were realized 'about the construction of the Universe in the image of a World Tree that was "drawn" in the sanctuary' (292). The World Tree turns out to be nothing more than three groups of statuettes. In the Roman period (beginning of our era) several pieces of Roman equipment were found in the sanctuary. These artefacts are interpreted as trophies dedicated by the local military elite, who fought successfully against Rome together with the Bosporan kings (296, 299). It is obscure to me why they cannot be interpreted as dedications by victorious Romans, who were happy to conciliate the local mountain dwellers. True, this is also an hypothesis but not necessarily worse than N.'s. More in general, I see a sort of archaeological arrogance when N. writes (288) that the true history of mountainous Crimea is better examined through the archaeological than the available literary sources.

Under the rather grandiloquent title 'Reciprocal strategies: imperialism, barbarism and classical Olbia' (333-346), R. Osborne concedes that his paper has little to offer in a volume on the meeting of cultures. In fact, if I do not misunderstand him, O. emphasizes the fundamental Greekness of Olbia after incisive analysis of the Olbian bone tablets (*SEG XXVIII* 659-661), *ateleia*- and proxeny decrees and coin issues, and argues that

there is 'no special concern with the non-Greeks on (Olbia's) border' (341); this is fair enough and, moreover, devoid of the sort of speculative hypotheses so abundantly on record in this volume. O. links the content of the bone tablets to Samian Pythagoras, i.e., to a Greek background. P. Gildager Bilde ('Some reflections on eschatological currents, diasporic experience, and group identity in the northwestern Black Sea region'; 29-45) suggests that the eschatological elements in these tablets were a response to 'insecure living conditions'; she advances a spate of sociological studies showing that people living in a specific diaspora can be expected to be liable to feelings of insecurity. G.B. may be right here, though in his approach O. focuses on the 'Greekness' of Olbians rather than on insecure Greeks. In addition G.B. argues that the Greek elites were influenced by the beliefs of their indigenous colleagues. She adduces Herodotus 4.94/95 but, unfortunately, Herodotus writes about belief in immortality of the Thracians on the Balkan, not of indigenous elites in southern Ukraine. In his very learned 'Dionysos and Herakles in Scythia: the eschatological string of Herodotus' book 4' (369-397), G.Hinge offers a detailed analysis of the same bone tablets and of other sources for Orphic-Dionysiac religion; he seems to conclude that the 'eschatological string' is typical of Greek agricultural civilization and alien to the Scythian religion and civilization: 'Scythian religion is irreligious' (388). If true, this will give pause to G.B., who, as said before, suggested that in their eschatological views the Greeks may have been influenced by the natives. I must refrain from any judgment in this field; but the conflict of opinions cannot be ignored.

All in all, we have a highly variegated collection of papers. It would have been useful if the editors had asked contributors to react upon divergent views formulated by colleagues on the same subject-matter. Some papers should have been excluded, since they do not fit the main theme of the book ('meetings of cultures'); other authors should have been confronted with the extremely speculative character of some of their theories. A good general map of the north coast of the Pontus Euxinos would have been welcome; now we have to make do with three maps for one specific area covered in Mordvintseva's article (50-52) and one general map (150) on which only a limited number of toponyms is given. Praiseworthy is the invitation to Ukrainian scholars to publish some of their work in English. Most scholars do not have access to their many publications in Ukrainian media.

H.W. Pleket.

FRANCESCO CAMIA, *Roma e le poleis. L'intervento di Roma nelle controversie territoriali tra le comunità greche di Grecia e d'Asia Minore nel secondo secolo a.C.: le testimonianze epigrafiche*. Athens: Scuola Archaeologica Italiana di Atene, 2009. 263 pp., 12 figs; 24,5 cm (Tripodes 10).- ISBN 978-960-98397-3-0.

The reviewer has ambivalent views about this book. First the positive side. C. has collected twelve examples



of Rome acting as arbitrator in territorial disputes between Greek poleis in the period ca 190-90 BC. Seven are from Greece, five from Asia Minor. Eight other cases are relegated to a separate section of 'Addenda et incerta'; in most of these eight cases Rome's involvement or the territorial character of the dispute are uncertain. For all the twelve documents C. has taken the Greek texts from an authoritative modern standard edition indicated in the lemmata with an asterisk; he did not examine the stones themselves. In the app.cr. C. claims to have recorded all readings which differ from those given in the standard edition (15). I have not checked all the apparatus critici but in the case of his text no 7 I his standard text is from *Syll.*<sup>3</sup>. In L. 18 he duly reproduces the reading of *Syll.*<sup>3</sup> but in the app.cr. he reproduces the same reading. Incidentally, in the lemma of this text, and in that of several other ones, he mentions Hiller von Gaertringen as editor of *Syll.*<sup>3</sup>. Every beginning epigraphist knows that Dittenberger and *Syll.*<sup>3</sup> are a perennial dyad. Hiller signed for vol. 4 only, containing the Indices. In the app.cr. of no. 7 I all of a sudden Dittenberger appears; here the editor of *Syll.*<sup>3</sup> must have been meant, since in the lemma his name does not appear in connection with another publication. I hasten to add that in general the lemmata are well organized. C. duly distinguishes between the ed.pr. and later editions which simply reproduce the text of the ed.pr.; useful references to studies which comment on the texts complete the lemmata.

C.'s commentary on the text is solid but could have been more succinct. C. neatly summarizes what has been written about the context of each case but offers hardly any new insights. Sometimes he deals with details about the history of some territorial disputes, which in itself is interesting enough but not immediately relevant for the main theme of the book, viz. the nature and background of Rome's role as arbitrator. The latter constitutes the problem which C. extensively discusses in the second, analytical part of his study (167-209).

C.'s conclusion is that Rome did not assume the role of arbitrator with an eye on strengthening its power and restricting the liberty and autonomy of the Greek cities; a fair conclusion in line with what scholars like E. Gruen and R.M. Kallet-Marx have maintained long since in the context of their general views about Roman imperialism having been rather defensive in the 2<sup>nd</sup> century BC.

C. rightly points out that in quite a few cases Rome simply told two conflicting cities, who had turned to Rome for help, to invoke the assistance of a third Greek city as arbitrator. In such cases Rome occasionally imposed a criterium on the basis of which the Greek arbitrator should proceed to judge the case. In C.'s document no 7 the Senate told the Greek arbitrators to establish which of the two contending cities owned the disputed land at the moment it became *amicus populi Romani*. This seems a deliberate policy to further the interests of Rome's friends and thereby of Rome itself. C., however, calls this an 'exception' (200). This may be too optimistic.

In document no 3 the Greek arbitrators conducted the trial in accordance with a letter of the Roman governor; in their final verdict they decided that the city, which owned the disputed land in 146 BC, should also be the owner at the time of the arbitration. This probably means that Rome told the Greek arbitrators to fol-

low the ideas which the Roman general Mummius formulated in 146 BC. These ideas may well have been in favor of the pro-Roman elements at that time. In C.'s fifth document, recording a case with which Rome itself dealt directly, the contending cities themselves advanced the argument - apparently held to be, if not convincing, at least reasonable - that they were in control of the land concerned when they became Rome's friend. Apparently, Greeks thought that this approach would be welcome to Rome. In this case Rome could afford to ignore this specific argument, because another equally pro-Roman solution was available, viz. the sentence of the Thessalian League from 196 BC, passed in accordance with the Thessalian laws *given to them by the Roman general Flamininus* (emphasis added, H.W.P.).

All in all, it seems as if C. is perhaps a bit too optimistic if he denies that Rome did not try to manipulate verdicts to their advantage (199: "pilotare" il verdetto). It remains, however, true that there are cases where Rome simply refers the case to a third Greek tribunal without imposing some sort of preliminary 'formula'. Perhaps it is only in specific cases and in a specific historical context that Rome strove to defend the interest of its amici.

What is the basis of the 'ambivalent' views, mentioned in the first sentence of this review? My ambivalence does not concern C.'s analysis of the twelve documents or his ideas about the relation between the way the Romans intervened and their imperialism, but rather his decision to reprint all the lengthy Greek texts, add Italian translations and sizeable commentaries. All this constitutes the bulk of this book. All these texts are available in various accessible Corpora. In S.L. Ager's *Interstate arbitration in the Greek world, 337-90 B.C.* (1996; cf. *SEG XLVI* 2340) the reader finds all of C.'s texts, except for his no 9, albeit without translations. C.'s texts bring nothing new and he does not explain on what grounds he chose his standard edition. The results of C.'s historical analyses could have been the subject of a substantial article, in which he articulated the views expressed by earlier scholars on his subject. C.'s book is the revised and updated version of his dissertation and shows that he deserves to be enrolled in the international community of scholars. On the basis of a recent study of 'I curatores rei publicae nella provincia di Achaia', *MEFRA* 119 (2007) 409-419, C. has reconfirmed this status. There is no need, however, to publish all the prose of a dissertation in a printed volume. Large parts of the twelve documents are completely irrelevant for C.'s main theme. Quotation of the relevant parts, actually quoted by him in his second part, would have been sufficient and functional. Students and libraries already suffer from what a French scholar many years ago called a 'surproduction abondante'. Supervisors of PhD-students are well advised to heed this warning.

H.W. Pleket

MICHAEL BLÖMER/MARGHERITA FACELLA/ENGELBERT WINTER (eds), *Lokale Identität im römischen Nahen Osten. Kontexte und Perspektiven*. Erträge der Tagung 'Lokale Identität im römischen Nahen Osten', Münster 19.-21. April 2007. Stuttgart; Franz Steiner Verlag, 2009. 340 pp.; 24,5 cm (Oriens et Occidens 18). – ISBN 978-3-515-09377-4).

Contemporary themes often determine the choice of subjects by historians. 'Globalization' can be a winner when it comes to acquiring subsidies for a colloquium and/or a book, though it may be doubted whether it, with all its specific modern connotations, really is a useful concept or heuristic device for preindustrial historians (cf. F.G. Naerebout, 'Global Romans? Is globalization a concept that is going to help us understand the Roman Empire', *Talanta* 38/39, 2006/2007 [2008] 149-170, and O.S. LaBianca/S.A. Scham (eds), *Connectivity in Antiquity: Globalization as a long-term historical process* (London, paperback ed. 2010)). 'Identity', whether national, regional or local, is another focus in the study of societies, contemporary or past. 'Romanization' or 'Hellenization' are out of favor; they smell of neo-colonialism and, worse, of Romans and Greeks consciously and rigorously imposing their cultures on subjected people, without any concern with the latter's own cultures. Incidentally, in some regions and cases (see this review in fine) these two concepts may still be useful, to the extent that Roman or Greek cultural elements may have played a dominant, albeit not an exclusive, role without the idea of a conscious policy having been cherished by Roman authorities.

The Middle East is historically a melting-pot of indigenous, Greek and Roman cultural phenomena. This idea prompted the editors of this volume to organize a colloquium on Local Identity in the Levant in the Roman Imperial period. The ten contributions all testify to a disturbing mélange of local, Greek and Roman elements in iconography and architecture, on funerary stelai, in temples and on coins, in various Near-Eastern cities and regions. Two papers are devoted to the analysis of literary sources. Millar writes about Libanius' views on the Near-East, whereas Hartmann tackles the 13th Sibylline Oracle. Both authors are interested in the extent to which their sources testify to the existence of specific identity-feelings. The editors modestly and rightly write (10) that no uniform image is to be expected of the cultural situation in such a variety of urban and regional contexts. There is one theory-oriented paper by M. Sommer, who briefly comments on concepts like integration, assimilation, 'Mischkultur' and 'Multikulturalität'. Regrettably, his remarks have not been used by the other authors who freely 'juggle' with their own vocabulary. Perhaps some kind of uniformity in the conclusions of the various authors could have been reached if they had agreed on the use of a uniform conceptual vocabulary.

M. Blömer examines a series of north-Syrian stelai with representations of weather-gods; A. Kropp investigates the architecture of three Augustus temples, erected by Herod the Great (Sebasta, Caesarea, Paneas), and of another temple built by the locals at Qalaat Fagra, 20 km northeast of Berytos, on the slopes of Mt. Lebanon; A. Lichtenberger devotes his paper to the representations on coins of Tyre and Berytos; A. Schmidt-Colinet deals with the reliefs on two recently discovered Palmyrene sarcophagi; W. Oenbrink subjects the funerary monument of G. Iulius Samsigeramos (*IGLS* 2212) to a thorough analysis; O. Stoll contributes a paper on representations on coins from the Mesopotamian garrison-cities Resaina and Singara; the better part of this huge paper (ca 100 pp.!), however, deals

with the history of these two cities, the birth and vicissitudes of the province of Mesopotamia (cf. for this problem M.A. Speidel, 'Ein Bollwerk für Syrien. Septimius Severus und die Provinzordnung Nordmesopotamiens im dritten Jahrhundert' *Chiron* 37, 2007, 405-433), and the two legions stationed there (Legio I and III Parthica), and with representations of vexilla and legionary arms on coins in general, indicating some sort of regimental/legionary identity: very dense, well-researched pages shedding much welcome light on all those subjects but perhaps a bit too much as preparation for the last twenty pages (305-326) in which the author finally sets himself to discuss the representations on the coins of the two cities: Kentaurs, representing the military, Tychai representing the city, and eagles. The latter can be interpreted as symbol of the legions but Stoll also suggests that in some specific representations they may have been the symbol of the allmighty indigenous 'Himmelsgott'. In this way S. is able to conclude that there may have been integration of several cultural strands: pride in the city's indigenous god(s), in the close links with the garrison and in loyalty to Rome in general.

In all these articles the concept of 'mixture' of various cultural elements plays a cardinal role. Blömer finds local variants of a weather-god, whose origin lies in the Iron Age; in some reliefs the god is dressed in what looks like a greco-roman military costume, but B. doubts whether such a motif represents a 'neue Bedeutungsebene'. It seems wiser to go one step further: through such anepigraphic stelai we hardly get access to any 'Bedeutungsebene', apart from a vague notion of a dominant 'smiling god', who, by putting on a Roman military costume, possibly acquired the connotation of an 'imperial smiling god'. But to call this a 'Bedeutungsebene' is to paste too 'tiefsinnig' a label on these stelai. In this connection I find consolation in the approach of M. Sommer who flatly states that in the absence of texts something like identity is hard to determine: 'pots are pots, not people' (239). For pots many other archaeological objects can be substituted. Kropp shows that for his Augustus-temples Herod 'adopted Roman models wholesale', whereas in the temple of Fagra 'hardly any Roman or Hellenistic elements can be found' (116). With Sommer we might be tempted to say that from architecture no meaningful local identity can be construed; but fortunately we have a series of Greek inscriptions from the site (*SEG* XLIX 2006-2020); from them we learn that the main temple was built for Claudius and the local Zeus Beelgalasos; it combined loyalty to Rome with a local identity expressed in both architecture and the worship of Beelgalasos. On the same site a temple of 'Atargatis of the Arabs' has been built: probably a reference to the Ituraean Arabs (115) and thus to a specific ethnic identity; not that we are able to grasp any concrete details about the meaning of Beelgalasos for local Arabs, but we now know at least that emperor-worship was combined with the cult of a local god, who in his turn was identified with Zeus. In the end, however, we may paraphrase another phrase of Sommer in which he argues that an inscription identifying a local deity with Zeus, cannot be an 'Ersatz für eine vollwertige Narrativik, wie sie nur literarische Texte zu bieten hat' (243; I apologize for the terrible 'Narrativik').

In Lichtenberger's, Schmidt-Colinet's and Oenbrink's papers we find, after meticulous and thorough analy-

sis of coins, sarcophagi and a funerary complex, a more or less identical conclusion about 'mixtures' of Roman and indigenous elements, in varying intensity. But what brief Phoenician inscriptions, indicating the *ethnos*, really tell us about the Tyrians' local identity, is bound to remain vague; they may have an 'identitätsstiftende Funktion' (155) but the contents of this identity and its meaning for both the producer and the user of these local bronze coins remain obscure in the absence of a 'vollwertige Narrativik' (243; cf. above). The owners of Schmidt-Colinet's sarcophagi presented themselves both as Roman citizens and as members of a Palmyrene elite dynasty; and if S.-C.'s interpretation of a female figure, holding a lance in her right hand and leading a camel with her left hand, as the goddess Astarte, who the mentality/mental identity of the owner remains unclear. The inscription (IGLS 2212; OGIS 604) reports that G. Iulius Samsigeramus was buried in the monument in 78/79 AD; we are grateful for a precise date but for the rest we have to make do with what turns out to be not much more than a hypothesis about Samsigeramus belonging to the local dynasty but not being a dynast himself. In the end O., like S.-C., leaps from the architectural analysis to the observation that the relief images serve to mark a 'feste(s) soziales Wertesystem' and an 'individual and cultural identity'. The values, however, are pretty hard to gauge and as a result the identity remains vague.

Whereas several authors seem happy with the term 'Mischkultur', Sommer tends to reject it (245) for reasons I do not quite understand. He argues that such a concept 'erklärt die Multikulturalität eines Weltreiches zur Abweichung von der Norm' (the latter being the homogeneous 'Nationalstaat'; 245). But does not 'Mischkultur' precisely refer to an encounter between the culture of the imperial centre and that of the periphery? The use of the concept 'culture of the imperial centre' does not necessarily imply a normative judgment; possibly the spectre of the romanisation-debate lingers in Sommer's mind, with the concomitant idea of a superior, normative Roman culture. Perhaps it is wise to stick to the concept of acculturation in a debate on cultural contacts: one of the variants is integration: 'two cultures accommodate, and individuals can be, or have to be, competent in two cultures' (F.G. Naerebout in L. Briault (and others; eds), *Nile into Tiber. Egypt in the Roman world*, Leiden-Boston 2007) 542/543). In fact Sommer himself writes about integration between peripheral and central cultures (245).

F. Millar contributed a magnificent article on Libanius' ideas about his 'Umwelt'. Libanius did not conceptualize the Orient as a region in its own right. For him it was a Greek region, with Greek cities and a flourishing Greek culture. This is the more remarkable since it is precisely in Libanius' time that the Christian Johannes Chrysostomos wrote that Antioch was the symbol of Anatolē. That this concept emerged in the 4<sup>th</sup> century AD for the first time (179) is not true. As early as AD 162/163 the Cappadocian city of Caesarea called itself in an inscription 'the first of Anatolē' (J.-L. Ferrary, *CRAI*, 2008, 1391; possibly a rival claim against cities calling themselves 'the first of Asia'). Remarkably enough M. Sommer (238) defines Cappadocia as part of the Roman frontier. In the 4<sup>th</sup> century AD Cilicia belonged to the Anatolē/

Oriens. Cappadocia bordered on Cilicia. All in all the text from AD 162/163 seems to foreshadow the later concept of the Oriens as a military district. The inscription from Caesarea belongs to the decades of M. Aurelius' and L. Verus' campaign against the Parthians.

M.'s general conclusion is that in Libanius' time Syria was a truly Greek world (186). But on 183 he adds a useful caveat, viz. that public urban life was hellenized 'zumindes auf einer bestimmten sozialen Ebene'. Libanius' view about Syria seems strongly determined by what he wanted to see, viz. a relatively small elite segment of society. He may have seen Greek inscriptions, Greek cults, Greek education everywhere but he may have largely ignored Syriac spoken in the countryside, though he once in passing noted that a trader spoke Syriac on the market (185). The appearance of Syriac in the 5<sup>th</sup>/6<sup>th</sup> centuries AD in epigraphy and literature may in actual fact have been the emergence of a pre-existing Syriac undercurrent. Apart from all this I feel at ease with F.'s defence of the concept of Hellenization; urban elite culture was indeed strongly hellenized; Greek culture was the dominant culture (the 'Leitkultur', to borrow a term from contemporary political debate), at least on a certain level.

Finally: Schmidt-Colinet's and Millar's papers are available in a more extended version in G. Koch (ed.), *Akten des Symposiums des Sarkophag-Corpus*, Marburg 2001 (Mainz 2007), 271-287 and *Scripta Classica Israelica* 26 (2007), 155-180, respectively.

H.W. Pleket

R. DOCTER/K. PANAYOTOVA/J. DE BOER/L. DONNELLAN/W. VAN DE PUT/B. BECHTOLD, *Apollonia Pontica* 2007. Department of Archaeology, Ghent University, 2010 (second edition), 188 pp., figs; 24.5 cm. – ISBN 978-90-78848-04-2.

This is the final report on the results of a short excavation campaign conducted by a team of Ghent University in the necropolis of Apollonia Pontica (nowadays Sozopol) on the Bulgarian Black Sea coast in August/September 2007. It is the Bulgarian archaeologist Kristina Panayotova who is in charge of the excavations of the entire necropolis. She invited Docter c.s. to take care of a small section of that necropolis consisting of three 4<sup>th</sup>-century BC graves situated in the first range of dunes just behind the beach: not a bad place for a team of young excavators! During the last hundred years more than 2200 graves have been discovered in the necropolises of Apollonia Pontica, situated on both sides of an unpaved coastal road. It is regrettable that a scheduled second campaign in 2008 had to be cancelled due to what rather mysteriously is called 'logistical problems' which could make 'working with a team of students' extremely difficult.

After an introductory article by Panayotova on the results of the Bulgarian excavations during the past decades, illustrated with magnificent colour-photos, the Ghentians take over. Donnellan briefly describes the three graves and their contents (29-46). Grave one contained a limestone cist with part of a skeleton and parts of two lekythoi; grave two yielded another skeleton and a lekythos; in grave three a third skeleton, probably of



a man, given the presence of a strigil, and two further lekythoi were found. In addition in the same area six so-called pottery depositions were found; the pottery is likely to have been used during funerary meals or libations. Further finds include a low wall, consisting of large and small stones with fragments of pottery, tiles and bones in its fabric and probably constituting the western limit of the grave plots, and remains of a fire-place. The large number of excellent colour-plates hardly compensates for the dreariness of the finds and the hard work accomplished to unearth them.

Four chapters, all called 'preliminary observations', follow. Bechtold and Docter write about the fragments of cooking ware (47-97); De Boer offers observations on Greek transport amphoras (99-122); the black glaze, painted and red slipped ware fragments are dealt with by Bechtold and Docter (123-150), the Attic figured and related wares by Van de Put (151-166). Docter contributes a brief chapter on Varia (167-174) and concluding remarks on the finds assemblage (175-184). All these sections testify to the impressive ability to accurately describe the fragmentary objects, classify and date them. One inscribed amphora-fragment (from Herakleia Pontike) may provide a more or less precise date in the second half of the 4<sup>th</sup> century BC (100). De Boer suggests that the Apollonians possibly decided to imitate Herakleian amphoras in their own workshops (113). The red clay fabric of amphora sherds seems to resemble that of locally produced plain ware vessels, an interesting suggestion which can perhaps be underpinned by chemical analysis of the clay.

In his concluding remarks Docter points out that of the ca 5400 pottery fragments only 569 are published in this book, making up for ca. 40% of the diagnostic sherds. D. suggests connecting the various finds with funerary rites executed on and around the graves and known from literary and legislative sources: drink offerings on the grave (pouring vessels; drinking cups) and meals at the grave (cooking vessels, fire-places).

All in all: the Ghent-equipe deserves praise for their thorough and rapid publication of the finds. On the whole, through no fault of their own, the finds are far from sensational and even somewhat depressing, at least for archaeologists, interested in long-term societal developments, and merely confirm what we already know from other sources about funerary rites. Incorporation of the finds in the final Bulgarian publication of the entire necropolis may well open wider vistas on the vicissitudes of Apollonia's funerary culture and on the city's relations with other ceramics-producing cities in the Greek world. If one realizes how many sensational sites have been recently excavated in Turkey and how many more wait for careful surveys and excavations (and are constantly threatened by illegal digs and building activities) and how variegated the finds on those sites are (inscriptions; statuary; public buildings; inscribed sarcophagi; ceramics), one cannot help feeling that the money and energy invested in the excavation of three modest graves in Apollonia Pontica may well have yielded more results when invested in Turkish archaeology. Just think of the spectacular results achieved by Belgian archaeologists in Pessinus and Sagalassus; in comparison the work in Apollonia is disappointing.

H.W. Pleket

JÁNOS GYÖRGY SZILÁGY, *Corpus Vasorum Antiquorum*, Hungary, fascicule 2, Budapest, Musée des Beaux-Arts, fascicule 2. Roma: «L'Erma» di Bretschneider, 2007. 135 pp., 49 pls.; 32 cm. – ISBN 978-88-8265-456-6.

ANGELIKA SCHÖNE-DENKINGER, *Corpus Vasorum Antiquorum*, Germany, fascicule 86, Berlin, Antikensammlung, fascicule 11. Munich: Verlag C. H. Beck, 2009. 98 pp., 29 figs, 84 pls, 23 Beilagen; 32 cm. – ISBN 978-3-406-59319-2.

The contrast between the tradition and circumstances of these two fascicles is great. Where the Berlin CVA's stands in a long tradition and is part of the ambitious and highly laudable German CVA project, aiming to produce dozens of CVA's over the coming decades, the Hungarian is only the second of this country after its 1981 fascicule.

It is good to see central and eastern European countries back on the international stage with fresh fascicles in the CVA series. Hungary embarked on the mission to finish the publication of its Italian holdings started with the first fascicule, more than 25 years ago. The present volume continues the Etruscan and other Italic wares, including 'Chalkidian', Lucanian, Paestan, Campanian, Sicilian, Gnathian and other painted ware, Daunian, Messapian, net lekythoi, plastic vases and gutti, leaving the Apulian for a next volume (forthcoming). The Etruscan and Campanian ceramics presented in this volume were acquired after the publication of the first CVA. The preface states, that the rather excessive commentary of the first volume, originating from the isolated position of the relatively unknown collection, is abandoned, but the reference to the *Summary Guide* for comparisons (7) is not really a replacement for the citing of appropriate parallels; a reference to the digitized CVA's ([www.cvaonline.org](http://www.cvaonline.org)) would not have been out of place here.

The photographs are excellent; details are given when the decoration requires it, contrast and detail are generally good. The same may be said of the (French) descriptions and comments. Fortunately, in contrast to the statement in the preface, the comments and comparisons are ample and steer clear of the minimalist line chosen in some recent anglophone CVA's (e.g. Ireland 1 and Glasgow). Descriptions are rather lengthy and verbose, and might well have been a bit more concise. Description and commentary are in one large block of text, without white spaces or headers, somewhat off-putting to the reader and making a quick search for dates, features or comment more difficult, but it is a minor inconvenience. Clay colours are Munsell-referenced, commendable in a volume with varied fabrics, where the exact dividing line between one make and another is not always clear.

The near-absence of profile drawings is to be regretted. In almost all modern CVA's they are an integral part. The study of shape has become more prominent in ceramology after Beazley (among others, Brijder, Oakley, Mommsen, Lezzi-Hafter), defining workshops with more precision than stylistic analysis alone would

allow. Maybe this is not yet the case in Italic ceramics, but that would seem all the more reason to make the effort to publish the collection with profile drawings. No reason is given for not doing so.

In bringing together indigenous and Greek vases in the same volume, an interesting cross-section is achieved. Another format than the rigid CVA would have encouraged reflection on their mutual influences and their respective uses; as it is, they are merely catalogued alongside. In the chapters on the indigenous vases of Apulia, the Gnathian ware, other painted ware, and gutti, introductory sections give a concise *status quaestionis*. For the other material, such a useful general introduction is omitted.

The collection is varied and contains interesting pieces. There are interesting examples of Etruscan geometric and orientalizing (Plates 1 to 11), a modest range of Etruscan black- and red-figure (pl. 12-14), Etruscan plastic, black glazed and plain ceramics (Plates 14-15). The collection comprises excellent Chalkidian amphorae (Plates 16-17), modest Campanian, Paestan Gnathia and Pagenstecher (Plates 18-19). The selection of Lucanian is more substantial in quality (not quantity), but doesn't comprise early Lucanian: large and well-illustrated vases by the Brooklyn-Budapest Painter (name-vase for the later work of this painter), Sydney Painter and Roccanova Painter (Plates 20-23), with excellent comment. A great variety of plastic vases from Italian and Sicilian soil (Plates 24-28) and a fine range of gutti (Plates 29-31) precede the large section of Gnathia and other painted ware (Plates 32-39), with an interesting Alexandrian provenance of Inv. 51.553 (Plate 34), a witness to the first large-scale export of South Italian ware in its latest phase. Again, the commentary is exemplary; the photographs in Plates 35-37 are too dark. After net lekythoi (Plate 40) and some varied painted and plain ware (Plate 41), the remainder of the fascicule is devoted to indigenous painted ware (Plates 42-49).

In conclusion, the fascicule offers a good cross-section of Italian pottery other than Apulian red-figure and is expertly written; the most important drawback is the virtual absence of profile drawings.

The Berlin CVA comprises the Antikensmuseum's wonderful collection of red-figured Attic and (few) Boeotian kraters. The presence of Boeotian and undetermined ware prompted the author to call in the archaeometric help of Hans Mommsen (Anhang II, 83-90), resulting in an enlightening demonstration of this type of analysis to decide provenance issues.

The volume is beautifully produced. The slightly crème paper is agreeable; the photographs are excellent, detail photographs are amply provided; a welcome addition to the standard way of publication is the overview of shapes on Plates 74-77. The four colour plates underscore the increasing decorative importance of added white from the late 5<sup>th</sup> century Dinos Painter into the 4<sup>th</sup> century; the addition of the very interesting Six's technique stamnos to these plates would have been desirable.

The volume comprises a limited number of vases: the introduction states 50 mixing bowls and fragments, I counted 2 volute kraters, 9 column kraters, 9 calyx kraters, 11 bell kraters, 6 stamnoi, one dinos, a handful of frag-

ments, 2 Boeotian kraters (actually, 4; 2 Boeotian are discussed among the Attic, see below) and one Lucanian. This is a good, albeit costly, tendency in the CVA series, as it offers the opportunity to present the development of these shapes in depth and with coherence, and it allows for a liberal policy concerning plates and details.

The quality of the collection is superb. It comprises the name vases of the Clio, Orpheus and Dinos Painters, a splendid early calyx krater of Euphronios, good work by the Pan Painter, Myson, the Sileus Painter and a number of other painters. The whole range of Attic red-figure is represented, from the pioneers down to the late fourth century. Sufficient attention is paid to the lesser examples in the collection.

The drawings, although accurate and useful, prompt a more general criticism. Only half of the shape is drawn, similar to e.g. the drawings in Oakley's *The Achilles Painter*; no details of secondary decoration are indicated. This is regrettable, as the measurement of volume is determined by the reserved line at the lip in the interior and we do not get the impression of the total volume.

Each shape is introduced by a general introduction on its history and historiography. In the descriptions, the indication of weight and volume of the vase is useful. The bibliography, which in German manner follows the measurements, would have greatly benefited from a larger list of abbreviations (now comprising little more than a page).

The descriptions of the figure scenes are accurate, preferring full sentences to brevity. They are not systematic from left to right, numbering the figures, but rather starting from the main feature of the scene. For example, the description of pl. 64 on 62 of the rejuvenation of the ram (to convince the daughters of Pelias to boil their father to return his youth to him) starts with the ram and continues to the surrounding women. I prefer a more concise and systematic description, but that may be a matter of taste.

The comment on the iconography is generally satisfactory. Unfortunately, the same cannot be said of the analysis of the style or the argumentation of attributions. Almost never specific features are compared and hardly any attribution is supported with comparanda. In general, the attributions are sound; most are Beazley's. The very first vase, however (Inv. F 2371, Plates 1-3), is erroneously compared with the Niobid Painter and removed from the ambient of the Peleus and Hector Painter. The fluent quality of the drawing and the detail of the eye make it clear that the draughtsman must be sought in the Polygnotan circle; cf. for instance the faces of Spina T422 (BA 213509); the date given to the vase, 460-450, is at least a decade too early. The other attributions are reliable, but at places show a lack of interest. Why no reference to Oakley's *Phiale Painter* (63-64) with the name vase of the Clio Painter (Inv. F 2401, Plates 40-41)? Inv. F 2641 (Plates 44-45), manner Dinos Painter, is clearly more advanced than Inv. F 2643 (Plates 42-43), Dinos Painter, while the latter is dated 420-410 and the former 420. In fact, the two vases offer a splendid opportunity to sketch the development of a high Classical painter, indebted to the Group of Polygnotos and still echoing the Parthenon sculptures in Plate 42 to the direct forerunner of early 4<sup>th</sup> century pot painters such as the Meleager Painter,

relinquishing the ground-line, stressing the pattern of the clothing in Plate 44; even the hair, solid in Plate 42 and in loose, lighter strands on Plate 44, bears witness to this transition. Opportunities like these are missed.

The archeometric research of Mommsen showed that Inv. F 2932 and F 33519 (Plates 37 and 59) are Boeotian; one wonders why they were not grouped with the two other Boeotian kraters. The attribution to the LC-Group leads to the interesting suggestion, in Mommsen's contribution, that the LC-Group may have worked in both Attica and Boeotia (90); the description refers to the appendix for this provenance question, but does not mention this suggestion.

The krater with relief appliqués (Inv. F 2640, Plate 30) in the description turns out to be a pastiche, put together from disparate ancient fragments and modern clay reliefs. A place in an appendix would have been more appropriate for this decorative but misleading vase.

The very crude but lively krater 1993.252 (Plate 73) falls under the heading 'unbestimmt'. Although it is difficult to place this type of production, it is possible to connect it to a workshop, and a quoted Ian McPhee points in the right direction: 'If it really comes from South Italy, then perhaps it belongs to one of the small local productions of red-figure vases in Lucania-Calabria' (73). A black-figure ivy pattern, similar to that on the rim of the Berlin krater, is used by the late Lucanian Dawlish Painter (The name vase from Dawlish, LCS no 903, pl. 71.5, and Naples 1814, LCS no 906, pl. 71.6). Trendall's characterization, 'with the Dawlish Painter [...] we sink into the depths of barbarism' (LCS 157) may well be felt to apply to the Berlin krater, and the style, with the big, misplaced eyes and disjointed anatomy, is comparable.

An appendix touches on the history of the collection, where objects lost in the war are described and, where possible, illustrated (79-82, beil. 19-23). Also included are a column krater and a stamnos, originally in the Paris Rothschild collection, and restored from the ruins of Hermann Goering's Garin hall. An inclusion within the general catalogue of the shapes would have done greater justice to their place in art history, but it is understandable that the author gave preference to history here.

The Berlin CVA is a great asset to the series as it presents a good and well-illustrated overview of Attic red-figure kraters, useful introductions to the shapes and an interesting discussion of archeometric research determining Boeotian provenances. More attention to the style and attribution would have added still further to the worth of this volume.

Winfred van de Put

S. SCHMIDT/J.H. OAKLEY (eds), *Hermeneutik der Bilder, Beiträge zu Ikonographie und Interpretation Griechischer Vasenmalerei*. Beihefte zum Corpus Vasorum Antiquorum Deutschland, Band IV. Munich: Verlag C. H. Beck, 2009. 187 pp., b/w figs; 30 cm. – ISBN 978-3-406-59321-5.

The fourth Beiheft of the German CVA-series addresses theoretical aspects of the interpretation of Greek vase-painting. The two editors, Schmidt and Oakley, had a scholarly dispute over the latter's interesting study,

*Picturing Death in Classical Athens*. The disagreement was resolved in a symposium, resulting in the present volume.

It has resulted in a satisfying, and very welcome, collection of articles. Rarely, iconologists devote systematic attention to theory, or even to theoretical aspects or assumptions in their interpretative work. While other archaeologies foraged in various strains of anthropology, sociology, history etc., the only two allies of the interpreting ceramologist were classical studies and ancient history, without much reflection on the nature of these dependencies. A practical hermeneutic approach, as outlined by the late 19<sup>th</sup>, early 20<sup>th</sup> century scholar Carl Robert, was the tacitly accepted premiss for most iconological studies. There are exceptions, such as Sourvinou-Inwood's structuralist analysis of death in ancient Greek art and literature, Bérard and Lissarague's semiotics, Hoffmann's structuralism. These approaches never were mainstream.

In all its brevity, Schmidt's introduction is the most thorough discussion of present-day hermeneutics in iconographic studies. He is aware of the shortcomings of the hermeneutics of Dilthey, Schleiermacher and Robert and of the present-day approaches which aim to remedy these shortcomings. In doing so, archaeology splits into a large amount of sub-disciplines, but at the same time the borders of what is a hermeneutic approach and what is not becomes almost non-existing. In particular, the 'inclusion' of semiotics into the hermeneutic practice, which Schmidt presents as a matter of course, is nearly a contradiction in terms. The most important difference between the hermeneutic approach and more scientific approaches is that hermeneutics reaches beyond the analytical 'Code-Knacken', the methodical search for systematic and universally valid explanations. He sketches how far the field of present-day hermeneutics has broadened, interpreting deposition ensembles in the light of social norms and values, using semiotic techniques to analyse images; even the border with 'system' approaches such as structuralism and functionalism are blurred (9-10). It becomes difficult to have a 'pure' discussion about the merits of the hermeneutic approach vis à vis structural approaches. The core hermeneutic ambition, 'to bridge the human or historical distance between mind and mind' (Gadamer), may not be as valid for these different approaches.

The 16 contributions of this collection fill in aspects of interpretation with varying degrees of theoretical substance. I will concentrate on the essays of Lissarague and Meyer, as the others are demonstrations of, rather than reflections on method.

The charming essay of Lissarague (15-22) discusses 'reading' and 'looking at' Greek vase-painting. He analyses the different layers of meaning and theoretical implications of the use of these words by the various authors. Of the five questions he asks in the frame of 'reading' the material (16), the first two are strikingly similar to the basic steps outlined by Robert in *Archaeologische Hermeneutik*, accurately establishing the image and then finding the apt wording to describe the image. His third question concerns another of Robert's preoccupations, the narrative aspects of the text, while his fourth discusses the modern-day perception of the images in reproduction. The fifth looks at the relation between different kind of images (e.g. on different media) and



stresses the importance to interconnect them in the wider frame of the culture. Lissarague himself admits that his essay is an unsystematic survey, rather haphazardly covering a lot of ground. A critical note: Steiner's *Reading Greek Vases* is not primarily about the interaction of text and image (15), but about repetition as the basic structure of Greek narrative art; Small's *The Parallel Worlds of Classical Art and Text* should have been mentioned in this context.

A deep and valuable article of Meyer (23-32) defends the meaningfulness of mythological images against generalizing interpretations, which seem to disparage going beyond the image to make sense of it in the context of ancient culture. Staying on the level of the image is ultimately only descriptive; refusing to introduce concepts from the cultures which produced and consumed the images causes a greater risk of introducing modern concepts than if we do, is her strong contention (23). She doubts whether the vase-painters actually aimed for their images to provoke contemplation and discussion about the *conditio humana*, which is so obviously the lasting attraction of mythology in the post-classical world. Instead, she looks for reasons to assume that mythological representations reflect and perpetuate social values and relations, and if it is their aim to do so. In 12 small chapters she attacks this question from various angles, to conclude that the 'affirmative' reading of mythological images is supported, not as moralistic educational media, but as tools for participation in the values, structure and history of society.

The remainder of the articles are mostly thoughtful illustrations of method. Stansbury-O'Donnell (33-41) shows, in a semiotic frame, how small variations in the pursuit formula, playing on public expectations, may result in a comic reading. Stähli (43-51) examines how a corpus of images, in his example that of naked women, may lead to conclusions about changing attitudes, cultural biases, mentalities. Kunze-Götte (53-64) reflects on the iconography of the white-ground lekythoi she has been working on for years, preparing the Munich CVA dedicated to this shape. This collection plays an important role in the thinking about the iconography of the shape, as E. Buschor based his articles on famous Munich vases. Among other observations, K-G's interpretation of the rocky background of some lekythoi as referring to the 'remoteness of the deceased from the world of the living' is worth noting.

Junker's article (65-76) tries to understand the appearance of mythological images at the end of the geometric period, turning the explanation of their earlier absence around, suggesting that images had a purpose first in an era of social and political turmoil, where members of the aristocracy articulated their social position (posthumously). Sutton (77-91) provides us with a useful corpus of love-making scenes on Attic black-figure pottery, but his categorization rests on unequal criteria (part workshop/shape, part nature of the decoration), and the material deserves a better thought-through interpretation. Seifert (93-101) examines the age differentiation of children and its function as social status; Sabetai (103-114) presents fountainhouse-scenes in a semiotic/anthropological frame, disputing a reading as a straightforward political symbol. Froning (115-124) reinterprets the Bird-krater formerly in Malibu; Hedreen

(125-133) examines Dionysian imagery as a reflection on primitivism versus civilization. The essays of Tsingirida, Kreuzer and Carpenter (135-159) focus on the role of individual artists or workshops in the development of specific themes, where Carpenter devotes specific attention to context.

Heinemann (161-175) treats the iconography of Attic ointment flasks (aryballoi, alabastra, lekythoi) with consideration of the actual use of the vessels. Shapiro closes the collection (177-186) examining a 'problem piece', a hydria in Berlin depicting a banqueting hero, the interpretation of which is a matter of long-standing controversy.

In conclusion, the volume is a great asset to iconographic literature. It could have been more valuable still if more than a rather limited number of contributions would have had theoretical matters as their main focus. Also, the contributions are somewhat one-sided; it would have been interesting to have a few articles by the scholars criticized by Meyer, working in a more system-oriented discourse, or by some of the increasing number of scholars devoting attention to the interplay of images and provenance.

Winfred van de Put

MARIE-CHRISTINE VILLANUEVA PUIG, *Ménades. Recherches sur la genèse iconographique du thiase féminin de Dionysos des origines à la fin de la période archaïque*. Paris: Société d'édition Les Belles Lettres, 2009. 292 S., 50 Abb.; 24 cm. – ISBN 978-2-251-32664-1.

Villanueva Puig ist eine ausgewiesene Kennerin dionysischer Bilder und hat zahlreiche Artikel zu einzelnen Aspekten der Mänaden veröffentlicht. Bei der vorliegenden Arbeit handelt es sich um die überarbeitete Version ihrer 2000 an der Sorbonne in Paris eingereichten Dissertation. Thema ihrer Untersuchung ist die Ikonographie der Mänaden auf schwarz- und rotfigurigen Vasen aus der Zeit von 560/50 bis 480 v.Chr.

Unter Mänaden versteht sie - im Unterschied zu Nymphen oder Bacchantinnen - sowohl die mythischen als auch die menschlichen Verehrerinnen des Dionysos. Grundlage ihrer Arbeit bilden ca. 3500 Darstellungen, eine wesentlich größere Materialbasis als die aller anderen Untersuchungen, die sich bisher mit diesem Thema beschäftigt haben.

Der Band ist in sieben Kapitel gegliedert: Die ersten beiden Kapitel behandeln literarische Quellen über historische Mänaden und die Tragödie 'Die Bakchen' des Euripides, das dritte bietet eine Übersicht über die typische Darstellungsweise und Attribute der Mänaden auf frührotfigurigen Vasen und die Kapitel IV bis VII eine chronologische Abfolge des Mänadenbildes auf schwarzfigurigen Gefäßen.

Im Kapitel I führt sie zum Verständnis der Bilder insbesondere hellenistische und römische Inschriften über ekstatische Frauenvereine aus Kleinasien an, da aus dem archaischen Athen selbst kein mänadischer Kult überliefert ist. Während diese späten Texte kultische Praktiken widerspiegeln, sind auf den Darstellungen Mythos und Kult unentwerrbar miteinander vermischt (S. 48).

Im Mittelpunkt des zweiten Kapitels steht die einzige vollständig erhaltene dionysische Tragödie, die 406 v. Chr. posthum uraufgeführten 'Bakchen' des Euripides. Die großen Übereinstimmungen der euripideischen Mänaden mit denen auf spätarchaischen rotfigurigen Bildern erklärt Villanueva Puig damit, dass beide den gleichen künstlerischen Gesetzen unterliegen.

In Kapitel III gibt sie einen Überblick über die Darstellungen der Mänaden auf rotfigurigen Bildern von 530 bis 480. In den wenigen Mythen, in denen Mänaden vorkommen, spielen sie insbesondere beim Tod des Pentheus eine ekstatische Rolle. Weiterhin untersucht die Autorin das Wesen der Mänaden unter acht verschiedenen Gesichtspunkten: Landschaft, Vegetation, Tiere, Musik, Tanz, Wein, Erotik und Kult. Kultischen Charakter haben die zu dieser Zeit aufkommenden Fackeln, der Altar und das Dionysosmaskenidol.

In den Kapiteln IV bis VII zeigt sie die Entwicklung des schwarzfigurigen Mänadenbildes in chronologischer Reihenfolge von den Vorläufern, den Komasten auf korinthischen Vasen, dem ersten Aufkommen der attischen Mänaden um 580, ihre typische Ausprägung seit Lydos bis zu den spätschwarzfigurigen Bildern, die in großer Zahl gleichzeitig mit den rotfigurigen existieren. Ein Vergleich der Mänadenbilder in beiden Techniken zeigt Unterschiede: auf schwarzfigurigen Vasen sind die Mänaden ruhiger, und manche Themen wie die reitende Mänade finden sich nur dort.

Im Kapitel VII richtet sie das Augenmerk auf die häufig nur flüchtig bemalten schwarzfigurigen Lekythen aus der Zeit von 510 bis 480. Interessanterweise tragen 910 Exemplare mänadische Darstellungen, darunter 50 Mänaden, die um das Dionysosmaskenidol tanzen. Wegen unzureichender Publikation sind diese Lekythen im Rahmen der dionysischen Bilder bisher zu wenig beachtet worden. Erst kürzlich hat Villanueva Puig den ersten Band der schwarzfigurigen Lekythen im Louvre vorgelegt (CVA Louvre 28). Sie betont die Funktion der Lekythen als Grabbeigabe und meint, dass die Mänaden eine Idee der Glückseligkeit verkörpern. Vgl. hierzu auch ihren Artikel: *Un Dionysos pour les morts à Athènes à la fin de l'archaïsme: à propos des lécythes attiques à figures noires trouvés à Athènes en contexte funéraire*, in: A. Tsingarida (Hrsg.), *Shapes and Uses of Greek Vases. Proceedings of the Symposium held at the Université libre de Bruxelles 27.-29. April 2006* (Brüssel 2009) 215-224.

Im Schlusskapitel greift Villanueva Puig mehrere Gedanken wieder auf. Am interessantesten scheint mir ihre Feststellung, dass sich die 3536 von ihr gesammelten Mänadenbilder vor allem auf drei verschiedene Gefäßformen verteilen: 1028 Amphoren, 910 Lekythen und 669 Schalen. Sie möchte deshalb die These von S. Moraw, *Die Mänade in der attischen Vasenmalerei des 6. und 5. Jahrhunderts v. Chr.* (Mainz 1998), es handele sich bei den mit diesen Bildern bemalten Gefäßen hauptsächlich um Symposionsgeschirr, relativieren (S. 210-211).

Einige Bemerkungen zur formalen Gestaltung des Buches. Das Abkürzungsverzeichnis am Anfang (S. 17-18) ist unvollständig, denn in den Anmerkungen der jeweiligen Kapitel hat die Autorin weitere Abkürzungen eingeführt, die besser in das allgemeine Verzeichnis gehörten. Dann hätten auch viele Verweise auf frühere Anmerkungen entfallen können. Von den über 3500 erwähnten Mänadendarstellungen führt sie nur etwa ein

Siebtel im Museumsindex auf. Leider fehlt ein Katalog der beschriebenen Stücke. Die Qualität der 50 schwarz-weißen Abbildungen ist nur teilweise gut, mehrere Bilder sind unscharf.

Das Werk bietet allgemein einen guten Überblick über das Thema. Überzeugend ist die ikonographische Analyse der verschiedenen Bildtypen und -elemente. Für die Frage nach der Häufigkeit der Mänaden auf den verschiedenen Gefäßtypen hat Villanueva Puig die Möglichkeiten der statistischen Auswertung allerdings nur unzureichend genutzt. Hilfreich wären Tabellen, die die Häufigkeit dionysischer Bilder auf den verschiedenen Gefäßformen in den von ihr besprochenen Zeiträumen aufführen, ähnlich wie zuletzt U. Kästner, *Attische Vasen mit Dionysosdarstellungen. Gefäß und Dekoration*, in: R. Schlesier / A. Schwarzmaier, *Dionysos. Verwandlung und Ekstase*. Ausstellungskatalog Berlin (Regensburg 2008) 55-69 und W. van de Put, *Dionysos on lekythoi: a surprising presence?*, in: E.M. Moormann / V.V. Stissi (Hrsg.), *Shapes and Images. Studies on Attic Black Figure and Related Topics in Honour of Herman Brijder*, BABesch Suppl. 14 (Leuven 2009) 37-43.

Der Wert der Arbeit leidet darunter, dass die Autorin das Manuskript wohl bereits 2003/2004 abgeschlossen hat, da sie generell Forschungen nach dieser Zeit nicht mehr berücksichtigt. So hat sie die Arbeit von G. Fahlbusch, *Die Frauen im Gefolge des Dionysos auf den attischen Vasenbildern des 6. und 5. Jhs. v. Chr. als Spiegel des weiblichen Idealbildes* (Oxford 2004), die sich mit dem gleichen Thema befasst, nicht erwähnt. Mänaden auf attischen Vasen sind in den letzten Jahren und Jahrzehnten häufiger Gegenstand von ikonographischen Studien gewesen, weshalb Villanueva Puig - abgesehen von den schwarzfigurigen Lekythen - wenig Neues beisteuern kann. Die Veröffentlichung ist einfach zu spät erfolgt, schade.

Angelika Schöne-Denkinger

O. DE CAZANOVE, *Civita Di Tricarico I. Le Quartier de la Maison du Monolithe et L'enceinte Intermédiaire* (Collection de L'École Française de Rome; 409). Rome: École française de Rome, 2008. xiii + 687 pp., 347 ill.; 28 cm. – ISBN 978-2-7283-0787-6 / ISSN 0223-5099; 409.

This volume is the first in a series presenting the results of the important French excavations at Civita di Tricarico, a major hill-fort site in Lucania (today Basilicata), conducted between 1988 and 2005. Thanks to this research project, the 1000 m. above sea level plateau of Civita di Tricarico can now be considered one of the best-investigated sites of this type in Southern Italy, and its outcomes greatly add to our understanding of settlement structures and societal organisation in this area in the eventful four centuries BC.

This first volume discusses the quarter of the so-called 'house of the monolith' and the middle fortification wall (the smallest walled circuit encloses the acropolis, the largest the entire flat hill-top), which partly intersect in the centre of the hilltop plateau. It not only presents in full the excavation data, but also provides detailed discussions on how these findings bear upon the general interpretation of the site and the wider region in historical terms, thus anticipating the volumes to come.

As is outlined in Chapter 1, the book aims to contribute to two continuing discussions in Central-Southern and Southern Italian archaeology: in the first place the debate on the establishment and character of hill-fort settlements in the 4<sup>th</sup> century BC; and second their fate in the 3<sup>rd</sup> and 2<sup>nd</sup> centuries BC. Traditional wisdom has assumed that most hill-forts were built in the 4<sup>th</sup> century BC and were semi-deserted, being only inhabited by a small elite, whereas their survival after the Roman incorporation of the area in the second quarter of the 3<sup>rd</sup> century BC (typically, after the fall of Taranto in 272 BC) has usually been doubted. Digs at different places on the 47 ha hilltop point, however, to a quite different picture for Tricarico. In Chapter 2, the author posits four main and two sub phases of settlement, which are dated first relatively and then absolutely, in the process discussing various challenges put by the nature of especially the ceramic and numismatic evidence. The first phase (I: ca 360-340 BC) consists of several houses. In the second phase (IIa: ca 300-280 BC), one of these houses is converted into what is dubbed the 'house of the monolith', which is expanded slightly later (IIb: ca 250 BC). The third phase (III: ca 240-225 BC) regards the construction of the middle fortification wall, which destroys several houses. In the fourth phase (IV: 210-200 BC) a communal banquet hall is built partly on the site of the house of the monolith.

The following Chapters (3-6) each discuss one of these phases and the related buildings. Each chapter includes ample discussion on the interpretation and wider significance of the findings in their regional and historical context, whereas additional discussions and evidence are detailed in separate appendices to these chapters. Thus, Chapter 3 presents the archaeological evidence for the earliest houses and goes on to discuss building techniques and the application of rather regular modules in their layout. Also pointing out the presence of the Greek *pastas* house-type, the chapter includes an important discussion of domestic architecture in this region.

Chapter 4 zooms in on one house (house E), which is transformed from a simple *pastas* type house into the so-called house of the monolith, increasing its surface around 300 BC from 100 to 248 m<sup>2</sup>, and then, around the middle of the 3<sup>rd</sup> century, to a peristylum house covering ca 320 m<sup>2</sup>. At the end of the century, however, it is reduced and partly overbuilt by the mentioned banquet hall.

Chapter 5 discusses the fortified wall circuit constructed on the plateau in the second half of the 3<sup>rd</sup> century. The especially for Lucania peculiar architectural combination of a largely rectilinear wall, *agger*, square towers and courtyard gate is amply discussed and framed in the broader Great Greek and Roman-Hellenistic architectural context. Different historical scenarios are presented: should its construction be connected to the installation of a Roman fortification or garrison, in the time that *Brundisium* was founded (244 BC), or during the second Punic War? The architectural types and materials applied, in any case, do not speak against such an interpretation, and the fact that Tricarico is virtually the only site to survive into the 2<sup>nd</sup> century BC, together with Rossano di Vaglio (cf. below), is also suggestive. Or is it better to see its construction as a response to allied obligations to raise armies for

Rome, to facilitate the levy, in 225 BC or the second Punic War? The author ultimately favours a solution connecting the wall in one or another way with the second Punic war, but always enables the reader to follow his reasoning step by step.

Chapter 6 treats the reduced house of the monolith and the communal banquet hall, to be dated just after the construction of the fortification wall. The banquet hall, complete with a dining room fitted with a simple mosaic and the probable remains of *klinai*, was located directly opposite the new gate, which invites speculation about its function. Communal dining halls become an important feature in Lucanian society in this period, and are usually located in or near sanctuaries and other public spaces. At Tricarico, a functional link with sanctuary P, ca 40 m. further to the SE, is feasible, but equally important seems to be its role in controlling the entrance of the middle fortified perimeter - not merely in a strategic sense but also in an ideological one, since fortified walls and gates seem to have occupied an important place in Lucanian society, as has been shown for instance also for Roccagloriosa by H. Fracchia and M. Gualtieri. In any case, it was short-lived, since it appears to have been destroyed already at the end of the 3<sup>rd</sup> century - perhaps indeed during the second Punic War. The following Chapters (7-14) present different categories of finds: red-figured ceramics, Gnathia wares, black gloss, kitchen wares, terracotta's, metal objects, and coins and include, together with the appendices to the preceding chapters, important discussions on the chronology of South Italian archaeology.

In the Conclusion, the main results are summed up and related to the broader questions laid out in the introduction. Although the present volume, on this particular segment of the site, has largely focused on the 4<sup>th</sup> and 3<sup>rd</sup> centuries BC, it should be borne in mind that other parts of the site (such as the acropolis, the lower city) demonstrate longer occupation of the site, well into the 1<sup>st</sup> century BC, whereas sanctuary P for instance was monumentalised around 200 BC and remained in use at least to the mid-2<sup>nd</sup> century BC. The two forthcoming volumes, dealing respectively with another domestic quarter and sanctuary P with its adjoined building, will therefore certainly shed more light on the long-term development of the site. Nonetheless, and laudably, more general conclusions are anticipated already in this volume.

As to the first main issue, the establishment and functioning of Lucanian hill-fort settlements in the 4<sup>th</sup> century, the author points out that Tricarico is a special case since no evidence has been found whatsoever (not even in the surrounding necropoleis) for previous, archaic, settlement on the plateau, which contrasts with most other sites. Tricarico thus seems to emerge *ex novo* as integral part of the usually posited articulation of Lucanian society in this period, marked by the establishment of hill-fort sites and extra-urban sanctuaries, and especially the evidence for Greek/Great Greek/Sicilian-style domestic architecture in this inland site adds significantly to the general picture.

The other issue regards the (dis)continuity of this type of sites in the 3<sup>rd</sup> century BC and beyond. Whereas the evidence presented by Tricarico certainly further complicates the - already longer under fire - tradition-



ally posited end-date of Lucanian settlements around ca 270 BC, its full historical significance depends still to a large extent on two related, and as yet unsolved, issues: first, general dating problems in the archaeology of Southern Italy for this period, and, second, the historical interpretation of the site. Assessing these related questions, the author carefully shows that the apparent deviant chronological development of Tricarico in comparison to similar sites may in part be biased by too high a chronology of the latter (and indeed, the volume under review here will certainly stimulate reviewing many of these chronologies). On the other hand, what the French research project has demonstrated at Tricarico it is not merely 'continuity'. Rather, all evidence points at a clear *flourishing* of the site in the mid-3<sup>rd</sup> century. Whereas sites like Muro Lucano, Serra del Cedro, Serra di Vaglio dwindle in this very same period, at Tricarico the house of the monolith reaches its maximum extension, and fortification walls and a monumental sanctuary are erected a little later. Whereas sanctuary sites flourish in the 3<sup>rd</sup> and 2<sup>nd</sup> centuries BC, Tricarico seems as yet to be the only thriving settlement site of the period. The major sanctuary of Rossano di Vaglio and the settlement of Tricarico seem to be the main sites in this period, and a connection between the two may have existed on an administrative level (cf. for Rossano as a 'cathedral in the desert': I. Battiloro and M. Osanna, *Continuity and change in Lucanian cult places between the third and first centuries B.C.*, in: G.-J. Burgers/T.D. Stek (eds), *The impact of Rome on cult places and religion in Italy. New approaches to change and continuity*, forthcoming). In any case, whereas other settlement sites revive in the 1<sup>st</sup> century BC, Tricarico again shows an intriguing antagonistic development and dwindles. The next two volumes, including the later phases of the site, will without doubt boost this debate.

It is hard to do justice in a short review to this important volume, and the hard work in the field and laboratory it represents, as it is full of amazing new evidence as well as thoughtful discussion on its interpretation and historical context. What certainly deserves special praise, however, is the clear presentation of both evidence and interpretation, and the commendable use of reconstruction drawings, digitally adapted colour photographs, and 2- or 3-dimensional plans, resulting in a clear, highly readable and stimulating work on a key site in Southern Italy.

Tesse D. Stek

M.L. MARCHI, *Ager Venusinus* II (IGM 175 II SO; 187 I NO; 187 I SE; 188 IV NO; 188 IV SO). Forma Italiae 43, Florence: Leo S. Olschki Editore, 2010. 306 pp.; 202 ill.; 5 separate maps; 34 cm. - ISBN 978-8822260246.

This volume completes a series of publications on the town and territory of the Latin colony of *Venusia*, founded in 291 BC in Southern Italy. More than twenty years of extensive field research by the author and collaborators has thus now been made available in the format of the renowned *Forma Italiae* series. Whereas the previous publications focused on the town and immediate surroundings of *Venusia* itself (M.L. Marchi/G.

Sabbatini, *Venusia* (IGM 187 I NO / I NE). Forma Italiae 37, Florence 1996), and on the area directly north of it (G. Sabbatini, *Ager Venusinus* I. Mezzana del Cantore (IGM 175 II SE). Forma Italiae 40, Florence 2001), the present volume deals with the hinterland of the Latin colony ranging from the west-south-west to the south-east. As such, the project successfully combines the traditional cartographic framework of the *Forma* (primarily aimed at mapping all Italian archaeology according to modern geographic map divisions, in this case the *Istituto Geografico Militare* maps, rather than to ancient topographical units) with a clearly defined cultural- and political-historical research topic: that is, the impact of Roman colonisation in this important region at the interface of local Lucanian/Samnite and Apulian/Daunian communities.

The inclusion of a general discussion on the development of the colonial landscape in this last volume, summing up also the results of the previous *Venusia* volumes, further enhances this historically coherent dimension. At the same time, sticking to the true *Forma Italiae* format means that sites of all periods and character have been included, which as we can imagine is no small task: this last volume alone counts 1060 sites, ranging from small scatters of surface material to comprehensive descriptions of major sites in the area such as Lavello (?*Forentum*) and Banzi (*Bantia*).

The structure of the work is straightforward. It begins with a brief description of the survey strategy. The project aimed at total coverage of the area, and apparently both site and offsite methods have been used - but in what circumstances and proportion is not clear. The same goes for the adopted resolution, the establishment of site boundaries and surfaces, and an eventual correction for visibility factors - all quite fundamental information for the later interpretation of the evidence. In any case, the descriptions in the site catalogue point at a rather detailed survey. A historical introduction follows, which discusses previous research in the area but also anticipates some of the main results of the project. The core of the work is formed by a *carta archeologica* of almost 200 pages with site descriptions, topographic information as well as some photos, and is supported by five separate IGM maps with the location of the sites. Building on this rich body of evidence, a reconstruction of the historical development of the Venusian territory follows, and the remainder of the review will concentrate on this discussion.

Neolithic sites have been recognised mostly in the area around Lavello, making up 12% of all archaeological sites in this area, whereas this percentage drops in SE direction to about 2-3% around Banzi and Palazzo. Bronze age sites are scarce, and a drop in the number of sites vis-à-vis the preceding period is proposed; Bronze age sites amount to 6% of all sites. Settlement gets denser in the archaic-classical period (7<sup>th</sup>-4<sup>th</sup> centuries BC), especially in the areas around modern Lavello, Banzi, Melfi and Ripacandida. Settlements are characterised by large (200-1000 ha) but not continuously inhabited areas, usually without fortification constructions, and are often alternated with burial areas just as in many other 'Daunian' sites. Whereas the earlier phases of such settlements consisted mainly of huts, these are over time replaced with rectangular buildings but maintain the same spatial con-

figuration. There is a general lack of small settlements such as farms in the archaic period, which means that most land will have been cultivated by people based in the village settlements. This situation changes radically in the 5<sup>th</sup>-4<sup>th</sup> centuries BC, when many small and medium sized settlements were established on hilltops or low ridges - and in fact M.'s study must be credited especially with casting light on this important but not always easily recognisable phase. Around the established settlements and alongside communication routes now also small farms start to appear, usually consisting of scatters of ca 100-400 m<sup>2</sup>. Interestingly, the area around the future colony of *Venusia* and that east of it seem to remain empty, and neither has a stable pre-Roman settlement been detected at the site itself as yet.

For the 4<sup>th</sup> and partly also 3<sup>rd</sup> centuries BC the well-known (if not equally well understood) pattern of rural infill with small farms is documented. Sometimes these cluster together to form more or less spaced out villages from 10-40 ha, and there is some evidence for artisanal production in these settlements too. This phase marks the beginning of a tumultuous period of quick change documented both in the archaeology of the region and in literary sources, and as such forms one of the most challenging issues to tackle. In M.'s reconstruction, the village pattern of settlement would be part of a more general 'samnitisation' of the area, sometimes overlaying earlier local settlements (cf. below), and would stop before the early 3<sup>rd</sup> century, i.e., before the foundation of the colony. In this way, M. posits a radical break in the pattern of settlement after the colonial foundation: 88% of the existing sites disappear, only 6% remain in use, although some sites appear to have been re-used in the Roman imperial period. As M. is careful to show, however, this pattern is far from universal: north of the colony about 40% of the sites show continuity, whereas the SW part, allegedly inhabited by Samnite/Samnitised groups shows a more drastic desertion of the landscape. M. explains this in ethnic-political terms (pp. 254-256), since according to her the Samnite/Lucanian population in the SW would have suffered more from the Roman colonisation than the allied Daunian communities in the north around Lavello. M. then proposes a general decline or desertion of the existing village settlements in favour of a wide dispersion of small colonists' farms in the early colonial period. Later in the late republican/triumviral period an increase in sites is noted, often on the same locations. These productive villas often continue (90%) into the imperial period, large villas occupying up to 6000 m<sup>2</sup>.

This general line of interpretation fits in neatly with conventional scholarship on Roman colonisation, but some readers may feel that the character of the available evidence, especially for the early colonial period and the supposed connection with land division projects, does not always allow such a precise reconstruction. It is here that the limitations all field survey archaeologists are wrestling with come to the surface: establishing continuity or discontinuity in multi-period sites, which is of fundamental historical importance in this case, is notoriously difficult; and the same goes for assessing the size and/or function of these settlements in different periods. For instance, the settlement of loc. Fontana S. Andrea (sites nos 361-365) is presented as a typical example of a pre-Roman site that is abandoned

after the foundation of the colony in the 3<sup>rd</sup> century BC. But how to establish discontinuity in a surface site where, besides pre-Roman finds (Daunian geometric; early Black Gloss), also occupation in the later republican and imperial periods is attested? Similarly, some examples of the early colonial farms, such as site nos. 354, 356-358 and 366-370 seem hard to date precisely: much of the finds date to the late republican and imperial periods (nos 356-358: including Dressel 2-4 amphorae and African red slip wares), whereas sites 366-370 are only generically dated, apart from one Black Gloss *skyphos* in site 367 dating to the end of the 4<sup>th</sup> or early 3<sup>rd</sup> century BC, but which is not directly related to the site and probably derives from a funerary context.

More in general, if we are not able to arrive at the chronological resolution needed for distinguishing the early colonial period (cf. Marchi/Sabbatini 1996, p. 111), how then can different waves of colonisation (e.g. after the Hannibalic War, and in the triumviral period) or other factors influencing the settlement development (such as Mediterranean-wide changes in land-use) be counted in? In particular the connection that is made between possible land division systems and sites (e.g. p. 357) would have needed explicit discussion on survey methodology, because the calculations of distances between sites appear to be based on a 100% recovery rate of ancient sites - which is perhaps in part corrected by including all sites dating to a broader period, but that would still require methodological explanation.

The noted differential developments within the colonial territory, finally, are highly interesting. Sidestepping the question whether or not these might be best explained straightforwardly in ethno-political terms (cf. above), together with the relative emptiness of the area before the foundation of the colony it points, as in other colonies, at a conscious choice on the part of the colonists to occupy the space in between existing local communities, arguably as a result of strategic and/or practical considerations, and in so doing spatially fixing these geopolitical constellations (see O. de Cazanove, *Les colonies latines et les frontières régionales de l'Italie. Venusia et Horace entre Apulie et Lucanie : Satires, II, 1, 34, Mélanges de la Casa de Velázquez* 35-2 [2005] 107-124). This is, in short, a highly valuable and important publication that will both enable and stimulate further research on Roman Republican colonisation and its interaction with local communities.

Tesse D. Stek

ILARIA DOMENICI, *Etruscae Fabulae. Mito e rappresentazione*. Rome: Giorgio Bretschneider Editore, 2009. xvi+316 pp., 21 figs + figs in text, VI pls; 24 cm (Archeologia 156). – ISBN 978-88-7689-253-0/ISSN 0391-9293.

Ever since the 15<sup>th</sup> century, scholars have sought the true matter of Etruria, myths or legends that were native products, as opposed to the Greek images so readily embraced by Etruscan artists. Past scholarship even looked to tales of Noah or the lost tribes of Israel for confirmation that Etruscans did partake of our own background; early Italian nationalism lent energy to

such endeavors. Left with art and Greek and Latin texts, our quest for native myth remains frustrated by the absence of Etruscan voices.

Domenici (hereafter D.) has selected a small number of myths and images, from the 4<sup>th</sup> to 1<sup>st</sup> centuries BC, mainly women's personal treasures (engraved hand-mirrors, cistae, gems and some jewelry) and family funerary urns in stone or terracotta. Additional funerary imagery includes the Tomb of the Volumnii, Perugia, and the François Tomb, Vulci. Curiously, sarcophagi rarely portrayed native themes; mainly from the Tarquinia region, those not depicting funeral scenes seem to illustrate Greek tales, especially Homeric events or battles like Amazonomachies. Conspicuously absent is 'public' iconography, such as temple architectural terracottas (except Orvieto-Belvedere, p. 245), usually read as Greek-inspired, and supposedly conveying political messages: see now, P. Lulof and C. Rescigno, eds, *Deliciae Fictiles IV. Architectural Terracottas in Ancient Italy. Images of Gods, Monsters and Heroes* (2011).

Potentially Etruscan myths include the prophets Tages and Vegoia, Cacū and the Vibenna brothers (which D. dissociates from Cacū in the tale of Herakles and the Ara Maxima, p. 160), scenes of the babies Epiur and Maris, the unlabeled 'wolf in the well' and the equally perplexing 'hero with the plow'. D. points out the inadequacies of the original identification of the latter as Echelōs of Marathon, and of the creature in the well with 'Olta' the monster despatched by Porsenna.

The supposed scene with Olta (pp. 175-196; like 'Tages' and 'Vegoia', the name is Latinized) is explained instead as the attempt to coerce a seer into revealing information. Some figures emerging from the well look like true animals, others are *Mischwesen*, and identified as a shape-shifting seer, like Nereus. The example illustrated is confusing, though: Olta No 3 (Chiusine terracotta) is a youth with animal paws who wears a wolf-skin over his head - would a shape-shifter need a costume?

Cacū caught by the Vibennas is said to reprise elements developed in Greek iconography for Orestes and Pylades in Tauris. The similar 'Recognition of Paris' scene offers a good example for associating mirrors and urns, mirror cases functioning as 'transmitting models' in transferring monumental pictorial narratives into smaller-scale private sculpture: see L.B. van der Meer, *Archetype - Transmitting Model - Prototype. Studies of Etruscan Urns from Volterra*, *BABesch* 50 (1975) 179-193.

D. brings to the discussion a depth of expertise in Greek and Latin literature, extending to the Late Antique authors such as John the Lydian (see I. Domenici/E. Maderna, *Giovanni Lido. Sui segni celesti*, 2007). This approach furnishes many interesting, sometimes anthropological, comparisons, but is also distracting: for instance, if we seek truly Etruscan myths, then Plato's Laws (where, for D., *paides presbytai* may equate to Tages, *puer senex*, pp. 84-86) may be misleading.

D.'s historical first chapter is invaluable, and the rest of the book is filled with painstaking references to past scholarship, ancient literature and recent iconographic studies, albeit in somewhat argumentative tone. D. does correct some errors of past publications, but in the absence of an index so much negative information is less useful than it might be. The index only covers

mythical characters and lacks authors, places, museum locations, etc. A small set of line drawings and photos adequately illustrate the myths discussed in detail - anything more complete would presumably have escalated the book's price into mythical realms. (A plate VII, the Mastarna scene of the François Tomb, is listed but not published.) The text of the Prophecy of Vegoia is presented twice, as 'Vegoia' and again under the 'hero with the plow' (p. 258) - which is proposed as emblematic of protecting the land boundaries.

The 'plowed-up boy' (D. reads Cicero's account as sincere, not mocking) Tages emerging from a furrow is linked to images of severed heads, including Orphic imagery (see also R.D. De Puma, *An Etruscan Mirror with the Prophesying Head of Orpheus*, *Record of the Art Museum*, Princeton University 60 [2001], 18-29). For the actuality of foundation rituals (p. 83), see in addition to Pyrgi, a discovery at Veii: G. Bartoloni, *Véies. Recherches récentes sur la 'citadella' de Piazza d'Armi*, *Les Dossiers d'archéologie* 322 (juillet-août 2007), 22-29.

The seventh of D.'s ten concluding points is the value of rejecting the 'norm': we may have problems interpreting artists' iconographic choices, but *they* did not make ignorant mistakes. The scene of Odysseus and Diomedes interrogating Helenus (pp. 132-135, 182-188, 263-265) resembles their adventure of torturing Palamedes in a well, because artists knew both stories and were deliberately enriching a tale with familiar poses, objects and aspects that also resonated with their well educated patrons. The *contaminatio* of attributes across myths (e.g. all seers can shape-shift) sounds like the sort of deipnosophistic talking points that intellectuals were supposed to prepare for banquet conversation.

What remains, then, as native Etruscan myth? Probably some Archaic imagery, such as the Bisenzio Olmo Bello bronze urn and wheeled stand, the Paris Painter's wolfman plate, etc. (for which see N. de Grummond (*Etruscan Myth, Sacred History and Legend*, 2006) and G. Kossack, *Religiöses Denken in dinglicher und bildlicher Überlieferung Alteuropas aus der Spätbronze- und frühen Eisenzeit (9.-6. Jahrhundert v. Chr. Geb.)*, 1999). We can acknowledge few 'native' components, it seems ... but then, on the Piacenza liver, nearly half the gods named, like the *Dii Involuti* of literary sources, lack portraits. What common people believed and retold, what they would have depicted if they had commissioned art, may have been very different from D.'s sophisticated icons.

Jean MacIntosh Turfa

BEAT BRENK, *The Apse, the Image and the Icon. An Historical Perspective of the Apse as a Space for Images*. Wiesbaden: Reichert Verlag, 2010. 207 pp., 106 figs, 37 pls; 25 cm. (Spätantike - Frühes Christentum - Byzanz. Kunst im ersten Jahrtausend. Reihe B: Studien und Perspektiven, Bd. 26) - ISBN 978-3-89500-703-3.

Upon receiving this volume, I was anxious to start reading for the title is much promising. Most previous studies on Early Christian apse mosaics have had an



iconographical approach, focussing on specific examples, their influences, models and motifs. Besides these meritable and interesting studies an overarching study into the genesis of the Early Christian apse decoration and its function in Early Christian architecture, liturgy and even devotion was lacking. In this book Beat Brenk proposes to explore the role of the apse within the larger framework of the use of imagery in Christian art in the first centuries of its existence. In his exploration he chooses to approach Early Christian apse mosaics as 'a result of a historical process evolving out of the late Roman tradition'. This approach sounds promising for it raises fundamental questions on the functions of apses and their associated decoration.

In the first chapter Brenk explores the origins and use of apses leading up to Late Antiquity. He focuses especially on apse decorations of fountains, nymphaea and thermae with aquatic themes or maritime landscapes. Water as bringer of life and associated motives fitted in very well, and can be associated, with Christian iconography and popular theology. These themes therefore seem to have played an important role in the emergence of the Christian apse mosaic. In the last part of this chapter Brenk, somewhat suddenly, introduces his thesis on an-iconic imagery, consisting of depictions of flora, fauna and symbols, as main constituent of apse programs in Early Christian churches. According to Brenk the 4<sup>th</sup>-century Christians preferred an-iconic imagery because of the Old Testamental prohibition of figural representations. Problematic in this thesis, however, is the lack of material to build on. His first example, the early 5<sup>th</sup>-century apse mosaic in the narthex of the Lateran baptistery, strictly speaking is not in a church or above a presbyterium. Brenk urges the reader to forget the, according to him medievalising, idea of fourth-century apse mosaics with large figural compositions.

In the next chapter the author analyses the pagan tradition in relation to the Christian apse mosaic and discusses the imperial connotations of iconic imagery in apses. In this comprehensive outline he introduces the expression 'visual cult' to describe the awe-inspiring impression made on the viewer by a statue or image in the apse and explain the apse as a show-case for images. At the end of this chapter he turns to Constantine's donation of the fastigium to Rome's Cathedral. The presence of this monument decorated with statues of Christ and the apostles, to him is proof of the fact that no figural composition could have been present in the apse mosaic, for the two programs would have competed with each other. In this argumentation for an-iconic apse decoration, Brenk postulates that 'many apses of 4<sup>th</sup>-century churches had no figural decoration at all'.

In the third chapter Brenk discusses the role of the virgin Mary in apse mosaics as expressing the human nature of Christ and explores the origins of her veneration. He stresses the difference between official theology and popular beliefs in this matter. The last chapter named: 'official representation and private worship', discusses the difference between the two and the influences of both on the function and iconography of the apse mosaic and icon.

In his discussion of this complicated subject some of

the points raised in this book have not been worked out entirely while some others are missing. Brenk, for example, leaves unclear when and how figural imagery was admitted in official decoration programmes and even contradicts himself on this matter. A discussion on the place and role of the apse within the church building and liturgy and its associated symbolism would have contributed to a better understanding of the apse as a showcase for imagery. The examples of Late Roman subterranean funerary architecture like the apse in the 'chamber of the millers' in the Domitilla catacomb are missing in the discussion on apse decoration. These could have shed light on the by Brenk recurrently stressed difference between visual expressions of official cult and theology and private veneration. Part of his argumentation on this last subject is somewhat unconvincingly, since it is constructed around the mosaic on the triumphal arch of Santa Maria Maggiore. I personally can't see this papal decoration program as a private statement of pope Sixtus instead of as an official theological statement. Mosaics on triumphal arches and apses seem way to prominent to carry nonofficial theological imagery. Comparing this highly figurative mosaic with the associated an-iconic, apse mosaic, one wonders about the plausibility of his thesis on an-iconic decorations. The detachment of the relation between the imagery in the apse mosaic and the function of the apse and the presbyterium in the liturgy proposed by Brenk struck me as implausible. Representations like the incarnated Christ on the mosaic in the S. Maria in Capua Vetere and the Lamb of God on that of the Santa Pudenziana are to me clearly associated with the Eucharist celebrated underneath these images.

Although the book under review partly exists of reworked lectures that make it sometimes somewhat incoherent Brenk is to be congratulated with this result of his important research. He has trodden a terra incognita and explored a highly important topic. Besides his placing the development of Christian apse mosaics in their Late Roman context, he has raised a number of important new questions on the character and function of apses and their mosaics. By stressing the importance of the development of apse mosaics as a genus of imagery of its own I hope this book will instigate a renewed discussion by other scholars on the issues raised in this broadly scoped book.

*Maarten van Deventer*

## Books received

AMALIA AVRAMIDOU, *The Codrus Painter. Iconography and Reception of Athenian Vases in the Age of Pericles*. Madison, WI: University of Wisconsin Press, 2011. 256 pp., 250 b/w figs. – ISBN 978-0-299-24783-6.

*La Bética en el concierto del imperio romano, Discurso Leído el día 13 de marzo de 2011 en el Acto de Recepción Pública por el Excmo. Sr. D. José Remesal Rodríguez Y Contestación por el Excmo. Sr. D. José María Blázquez Martínez*. Madrid: Real Academia de la Historia, 2011. 166 pp.; 23 cm. – ISBN 2910014400667.

JOSÉ M. BLÁZQUEZ MARTÍNEZ (ed.), *Historia económica de España en la Antigüedad*. Madrid: Real Academia de la Historia, 2011. 235 pp., figs; 23 cm. – ISBN 978-84-15069-23-2.

LARISSA BONFANTE (ed.), *The Barbarians of Ancient Europe. Realities and Interactions*. Cambridge: Cambridge University Press, 2011. 395 pp., figs, 23 colour pls; 26 cm. – ISBN 978-0-521-19404-4.

THOMAS BRISART, *Un art citoyen. Recherches sur l'orientalisation des artisans en Grèce proto-archaïque*. Bruxelles: Académie Royale de Belgique, 2011. 352 pp., 20 figs; 24.5 cm. – ISBN 978-2-8031-0278-5/ISSN 0378-7893.

DIEDERIK BURGERSDIJK/WILLEMJIN WAAL (eds), *Constantinopel. Een mozaïek van de Byzantijnse metropool*. Leuven: Peeters Publishers, 2011. 261 pp., figs; 24 cm (Mededelingen en Verhandelingen van het Vooraziatisch-Egyptisch Genootschap Ex Oriente Lux, 36). – ISBN 978-90-72690-00-5.

AURELIO BURGIO, *Il paesaggio agrario nella Sicilia ellenistico-romana. Alesia e il suo territorio*. Rome: «L'Erma» di Bretschneider, 2008. 278 pp., 186 figs, 2 maps; 31 cm (Studi e Materiali. Dipartimento di Beni Culturali - Sezione Archeologica Università di Palermo 12). – ISBN 978-88-8265-483-2.

ELENA CALANDRA, *The Ephemeral and the Eternal. The pavillion of Ptolemy Philadelphos in the court of Alexandria*. Athens: Scuola Archeologica Italiana di Atene, 2011. 191 pp., 28 figs; 24.5 cm (Tripodes 13). – ISBN 978-960-98397-8-5/ISSN 1791-1850.

ANGELOS CHANIOTIS (ed.), *Ritual Dynamics in the Ancient Mediterranean. agency, Emotion, Gender, Representation*. Stuttgart: Franz Steiner Verlag, 2011. 390 pp., b/w figs; 24 cm. – ISBN 978-3-515-09916-5.

LAURA DANILE, *La ceramica grigia di Efestia dagli inizi dell'età del ferro all'età alto-archaica*. Athens: Scuola Archeologica Italiana di Atene, 2006. 123 pp., XXIX tav.; 31 cm (Monografie della Scuola Archeologica di Atene e delle Missioni Italiane in Oriente XX.2/1, Lemno 2. Scavi ad Efestia 1). – ISBN 978-960-98387-9-2.

ROBERTO EGIDI/FEDORA FILIPPI/SONIA MARTONE (eds), *Archeologia e infrastrutture. Il tracciato fondamentale della linea C della metropolitana di Roma: prime indagini archeologiche*. Florence: Leo S. Olschki, 2010. 327 pp., many figs; 28 cm (Bollettino d'Arte). – ISBN 978-88-222-6090-1.

JÜRGEN FRANSSSEN, *Votiv und Repräsentation. Statuarische Weihungen archaischer Zeit aus Samos und Attika*. Heidelberg: Verlag Archäologie und Geschichte, 2011. 435 pp., 19 pls, 1 CD; 30.5 cm (Archäologie und Geschichte 13). – ISBN 978-3-935289-36-8.

K. FITTSCHEN/P. ZANKER/P. CAIN, *Katalog der römischen Porträts in den Capitulinischen Museen und den anderen kommunalen Sammlungen der Stadt Rom, Band II: Die männlichen Privatporträts*. Berlin: Walter de Gruyter GmbH&CO, 2011. Text volume XVI+210 pp.; ill. volume 270 pp., 1048 figs; 35 cm. – ISBN 978-3-11-022886-1).

MARGARITA GLEBA/HELLE HORSNAES (eds), *Communicating Identity in Italic Iron Age Communities*. Oxford: Oxbow Books, 2011. 232 pp., b/w figs, 15 colour pls; 25.5 cm. – ISBN 978-1-84217-991-8.

ELISABETTA GOVI/GIUSEPPE SASSATELLI (eds), *Marzabotto. La casa 1 della regio IV ~ Insula 2*. Vol. 1: *Lo scavo*. Vol. 2: *I materiali* (Studi e Scavi, nuova serie 26, Kainua 2). Bologna: Ante Quem, 2010. 329 + 513 pp, 445 + 373 ill. and 8 + 7 colour pls, 2 separate maps, 29.5 cm. ISBN 978-88-7849-057-4.

EMANUELE GRECO, *Topografia di Atene. Sviluppo urbano e monumenti dalle origini al III secolo d.C. I: Acropoli - Areopago - Tra Acropoli e Pnice*. Athens/Paestum: Pandemos, 2010. 304 pp., 155 figs, 2 maps; 29 cm (SATAA 1). – ISBN 88-87744-34-3.

EMANUELE GRECO, *Topografia di Atene. Sviluppo urbano e monumenti dalle origini al III secolo d.C. 2. Colline sud-occidentali - Valle dell'Ilisso*. Athens: Scuola Archeologica Italiana di Atene, 2011. pp. 309-582, figs; 28.5 cm (SATAA 2). ISBN 978-88-87744-38-5.

MATTHIAS HAAKE/MICHAEL JUNG (Hg.), *Griechische Heiligtümer als Erinnerungsorte. Von der Archaik bis in den Hellenismus. Erträge einer internationalen Tagung in Münster, 20.-21. Januar 2006*. Stuttgart: Franz Steiner Verlag, 2011. 163 pp., 10 figs; 24 cm. – ISBN 978-3-515-09875-5.

*Hephaistos 27*, 2010. New Approaches to Classical Archaeology and related Fields. Münster: LIT Verlag, 2011. – ISSN 0174-2086/ISBN 978-3-643-99902-3.

RAY LAURENCE/DAVID J. NEWSOME (eds), *Rome, Ostia, Pompeii: Movement and Space*. Oxford: Oxford University Press, 2011. 380 pp., 77 figs, 11 tables. – ISBN 978-0-19-958312-6.

BERND LIESEN (ed.), *Terra Sigillata in den germanischen Provinzen. Kolloquium Xanten, 13.-14. November 2008*. Mainz am Rhein: Verlag Philipp von Zabern, 2011. 352 pp., figs; 28.5 cm (Xantener Berichte 20). – ISBN 978-3-8053-4345-9.

PATRICIA LULOF/CARLO RESCIGNO (eds), *Deliciae Fictiles IV. Architectural Terracottas in Ancient Italy. Images of Gods, Monsters and Heroes. Proceedings of the International Conference held in Rome (Museo Nazionale Etrusco di Villa Giulia, Royal Netherlands Institute) and Syracuse (Museo Archeologico Regionale 'Paolo Orsi') October 21-25, 2009*. Oxford: Oxbow Books, 2011. 633 pp., b/w figs, XVI color pls; 28.5 cm. – ISBN 978-1-84217-426-5.

DANIELA MARCHIANDI, *I periboli funerari nell'Attica classica: lo specchio di una "borghesia"*. Athens: Scuola Archeologica Italiana di Atene, 2011. 245 pp., figs, XXX pls, cd; 29 cm (SATAA 3). – ISBN 978-88-87744-35-4.

GIOVANNI MARGINESU, *Gli epistati dell'Acropoli. Edilizia sacra nella città di Pericle 447/6-433/2 a.C.* Athens/Paestum: Pandemos, 2010. 216 pp., 33 figs, 5 tables; 29 cm (SATAA 5). – ISBN 88-87744-36-1.

L.B. VAN DER MEER, *Etrusco Ritu. Case Studies in Etruscan Ritual Behaviour*. Louvain: Peeters, 2011. 167 pp., 33 figs; 27.5 cm (Monographs on Antiquity V). – ISBN 978-90-429-2538-0.

NICOLAS MONTEIX, *Les Lieux de Métier. Boutiques et Ateliers d'Herculanum*. Rome: École Française de Rome, 2010. XIV+478 pp., 228 figs; 28 cm (Bibliothèque des Écoles françaises d'Athènes et de Rome. Fasc 344, Collection du centre Jean Bérard 34). ISBN 978-2-7283-0891-0.

Nicolas Monteix/Nicolas Tran (eds), *Les savoirs professionnels des gens de métier. Études sur le monde du travail dans les sociétés urbaines de l'empire romain*. Naples: Centre Jean Bérard. 2011. 172 pp., 74 figs; 27.5 cm (Collection du Centre Jean Bérard 37/Archéologie de l'artisanat antique 5). – ISBN 978-2-918887-09-6/ISSN 1590-3869.

ERIC M. MOORMANN, *Divine Interiors. Mural Paintings in Greek and Roman Sanctuaries*. Amsterdam: Amsterdam University Press, 2011. 259 pp., 109 colour figs, 115 b/w figs; 30.5 cm (Amsterdam Archaeological Studies 16). – ISBN 978-90-8964-2615.

KLAUS MÜLLER, mit Beiträgen von Valentin Kockel, *Die Ehrenbogen in Pompeji*. Wiesbaden: Dr. Ludwig Reichert Verlag, 2011. 140 pp., 115 figs, 23 pls; 32.5 cm (Studien zur antiken Stadt 10). – ISBN 978-3-89500-817-7.

MARTIN MÜLLER/THOMAS OTTEN/ULRIKE WULF-RHEIDT (eds), *Schutzbauten und Rekonstruktionen in der Archäologie, von der Ausgrabung zur Präsentation Xanten*, 21.–23. Oktober 2009. Mainz am Rhein: Verlag Philipp von Zabern, 2011. 504 pp., figs; 28.5 cm (Xantener Berichte 19). – ISBN 978-3-8053-4344-2.

MARIA STELLA PACETTI, *Corpus Speculorum Etruscorum. Italia 6*. Roma – Museo Nazionale Etrusco di Villa Giulia, Antiquarium: La collezione del Museo Kircheriano, fascicolo III. Rome: «L'Erma» di Bretschneider, 2011, 252 pp, figs, 152 pls, 32.5 cm. – ISBN 978-88-8265-624-9.

ISABELLA SOLIMA, *Heiligtümer der Artemis auf der Peloponnes*. Heidelberg: Verlag Archäologie und Geschichte, 2011. 252 pp., 29 figs, 2 pls; 30.5 cm (Studien zu antiken Heiligtümern 4). – ISBN 978-3-935289-35-1.

CHRISTOPHER RATTE, with a contribution by Michael H. Ramage and Robert H. Tykot, *Lydian Architecture. Ashlar Masonry Structures at Sardis*. London: Harvard University Press, 2011. XVII+292 pp., 286 figs; 31 cm (Archaeological Exploration of Sardis, report 5). – ISBN 978-0-674-06060-9.

MARCUS REUTER/ROMINA SCHIAVONE (eds), *Gefährliches Pflaster. Kriminalität im Römischen Reich*. Mainz am Rhein: Verlag Philipp von Zabern, 2011. 437 pp., figs; 28.5 cm (Xantener Berichte 21). – ISBN 978-3-8053-4393-0.

ANDREAS SCHACHNER, *Hattuscha. Auf der Suche nach dem sagenhaften Großreich der Hethiter*. München: Verlag C.H.Beck, 2011. 364 pp., 157 figs; 22 cm. – ISBN 978-406-60504-8.

HANS-JOACHIM SCHALLES (ed.), *Die frühkaiserzeitliche Manuballista aus Xanten-Wardt*. Mainz am Rhein: Verlag Philipp von Zabern, 2010. 179 pp., figs; 28.5 cm (Xantener Berichte 18). – ISBN 978-3-8053-4274-2.

DANIEL SCHYLE, *Der Lousberg in Aachen. Ein jungsteinzeitlicher Feuersteintagebau mit Beilklingenproduktion*. Mainz am Rhein: Verlag Philipp von Zabern, 2010. 173 pp., 56 figs, 67 pls, Beilage 1; 28.5 cm (Rheinische Ausgrabungen 66). ISBN 978-3-8053-4326-8.

HADWIGA SCHÖRNER (ed.), *Corpus Vasorum Antiquorum, Deutschland, Jena Sammlung antiker Kleinkunst der friedrich-Schiller-Universität*, Band 1. München: Verlag C.H. Beck, 2011. 118 pp., 23 figs, 17 drawings, 66 pls. 33 cm. ISBN 978-3-406-62560-2.

STEPHAN WEIß-KÖNIG, *Graffiti auf römischer Gefäßkeramik aus dem Bereich der Colonia Ulpia Traiana/Xanten*. Mainz am Rhein: Verlag Philipp von Zabern, 2010. 280 pp., 42 figs, 78 pls, 8 photopls; 28.5 cm (Xantener Berichte 17). – ISBN 978-3-8053-4273-5.

MARIA WIGGEN, *Die Laokoon-Gruppe. Archäologische Rekonstruktionen und künstlerische Ergänzungen*. Ruppolding: Verlag Franz Philipp Rutzen. 2011. 322 pp., 154 figs, 3 Beilagen; 27 cm (Stendaler Winckelmann-Forschungen 9). – ISBN 978- 3-477-06463-7.

NINA ZIMMERMANN-ELSEIFY, *Corpus Vasorum Antiquorum. Deutschland, Band 89*, Bochum, Berlin Antikensammlung ehemals Antiquarium, Band 12. Attisch weissgrundige Lekythen. München: Verlag C.H. Beck, 2011. 76 S., 10 Abb., 11 Beil., 48 Taf.; 32.5 cm. – ISBN 978-3-406-61493-4.

ELENI ZIMI, *Late Classical and Hellenistic Silver Plate from Macedonia*. Oxford: Oxford University Press, 2011. XXIV+308 pp., 170 figs; 29.5 cm. – ISBN 978-0-19-955044-9.